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# Petroleum Supply Monthly



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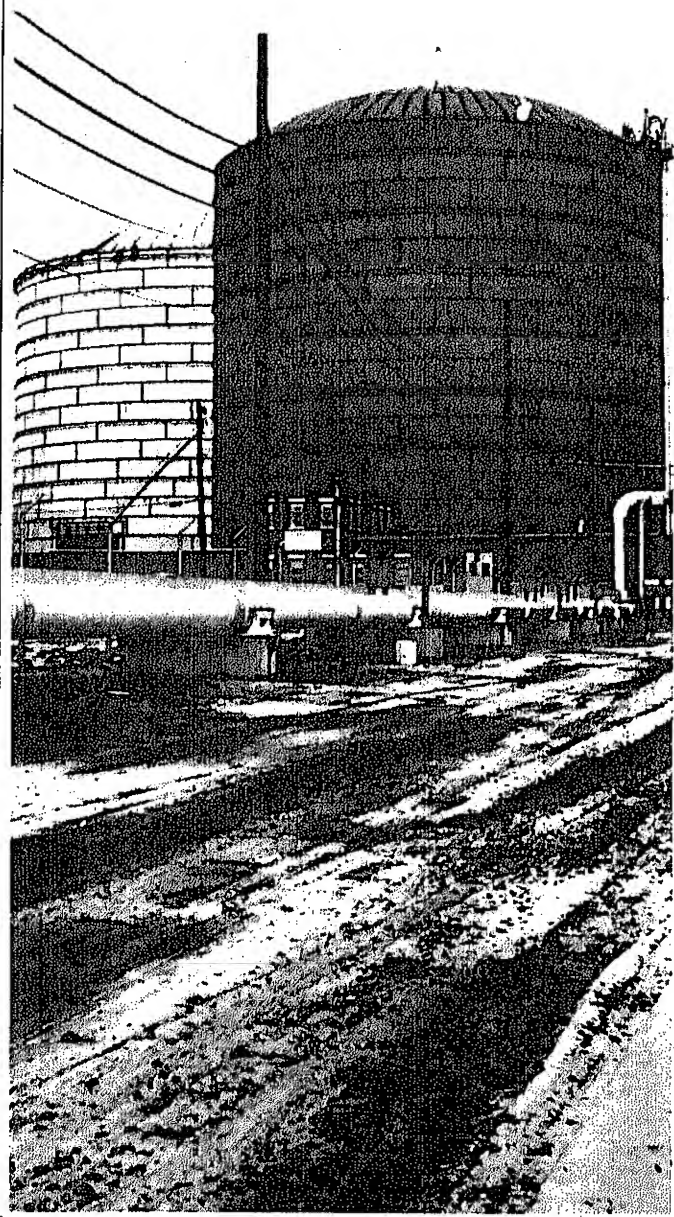




# Contents

## This Month in the PSM

This issue of the *Petroleum Supply Monthly* features a discussion of the National Petroleum Council's new estimates of minimum operating inventory levels and primary storage capacities for crude oil and selected refined petroleum products. The article, "National Petroleum Council Revises Minimum Operating Inventory Estimates," begins on page ix and compares the new estimates with previous levels. The article also summarizes major factors identified by the Council as contributing to observed changes in inventory levels.



## Petroleum Focus

Petroleum Supply Summary.....	vii
National Petroleum Council Revises Minimum Operating Inventory Estimates.....	ix

## Summary Statistics—through November 1983

Crude Oil and Petroleum Products Overview...	2
Crude Oil Supply and Disposition.....	6
Crude Oil and Petroleum Products Imports....	8
Finished Motor Gasoline Supply and Disposition.....	11
Distillate Fuel Oil Supply and Disposition.....	13
Residual Fuel Oil Supply and Disposition.....	15
Liquefied Petroleum Gases Supply and Disposition.....	17
Other Petroleum Products Supply and Disposition.....	18
Sources.....	19

## Detailed Statistics—October 1983

<b>National Statistics</b>	
1. U.S. Petroleum Balance.....	23
2. Supply and Disposition of Crude Oil and Petroleum Products.....	24
3. Year-to-Date Supply and Disposition of Crude Oil and Petroleum Products.....	25
4. Daily Average Supply and Disposition of Crude Oil and Petroleum Products.....	26
5. Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products.....	27

## Supply and Disposition of Crude Oil and Petroleum Products by PAD Districts

6. PAD District I.....	28
7. PAD District II.....	29
8. PAD District III.....	30
9. PAD District IV.....	31
10. PAD District V.....	32

## Production of Crude Oil and Lease Condensate

11. Production by PAD District and State, February 1983.....	33
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## Natural Gas Processing

12. Plant Production of Petroleum Products by PAD Districts.....	34
--	----

## Refinery Operations by PAD District

13. Refinery Input of Crude Oil and Petroleum Products.....	35
14. Refinery Production of Petroleum Products.....	36
15. Percent Refinery Yield of Petroleum Products.....	37



# Contents (Continued)

	Page		Page
<b>Imports and Exports of Crude Oil and Petroleum Products</b>		<b>Figures</b>	
16. Imports by PAD District .....	38	Petroleum Overview .....	4
17. Imports by Source and PAD District .....	39	Petroleum Products Supplied .....	4
18. Exports by PAD District .....	43	Crude Oil Supply and Disposition .....	5
19. Exports by Destination .....	44	Crude Oil Ending Stocks .....	5
<b>Stocks</b>		Motor Gasoline Supply and Disposition .....	10
20. Stocks of Crude Oil and Petroleum Products by PAD District .....	46	Motor Gasoline Ending Stocks .....	10
<b>Transportation of Crude Oil and Petroleum Products Between PAD Districts</b>		Distillate Fuel Oil Supply and Disposition .....	12
21. Movements by Pipeline, Tanker and Barge .....	51	Distillate Fuel Oil Ending Stocks .....	12
22. Movements by Pipeline .....	52	Residual Fuel Oil Supply and Disposition .....	14
23. Movements by Tanker and Barge .....	52	Residual Fuel Oil Ending Stocks .....	14
24. Net Movements by Pipeline, Tanker, and Barge .....	53	Liquefied Petroleum Gases Supply and Disposition .....	16
<b>Heavy Fuel Oils by Sulfur Content</b>		Liquefied Petroleum Gases Ending Stocks .....	16
25. Production of Residual Fuel Oil .....	54		
26. Stocks of Residual Fuel Oil .....	54		
27. Movements by Tanker and Barge .....	54		
28. Imports of Residual Fuel Oil by Country of Origin .....	55		
29. Imports of Residual Fuel Oil by State of Entry .....	56		
<b>Glossary</b>			
Definitions of Petroleum Products and Other Terms .....	59		
Bureau of Mines Petroleum Refining Districts and PAD Districts .....	65		
<b>Maps</b>			
PAD Districts .....	66		
Bureau of Mines Refinery Districts .....	67		
District Map, Oil and Gas Division, Railroad Commission of Texas .....	68		
<b>Explanatory Notes</b>			
1. Data Collection Methodology .....	71		
1.1 Weekly Petroleum Supply Reporting System (WPSRS) .....	71		
1.2 Monthly Petroleum Supply Reporting System (MPSRS) .....	72		
1.3 Census Import (IM-145) and Export (EM-522 and EM 594) Data .....	74		
2. Supply .....	75		
3. Domestic Crude Oil Production .....	75		
4. Disposition .....	76		
5. Stocks .....	76		
6. Average Stock Levels .....	76		
7. Movements .....	77		
8. Preliminary Monthly Statistics .....	77		
9. Notes on Tables .....	77		

# **Petroleum Focus**





# Petroleum Supply Summary

Average Volume for Period (Million Barrels Per Day)	November			Cumulative January Through November		
	1983	1982	% Change	1983	1982	% Change
Total Product Supplied	15.3	15.0	1.9	15.0	15.3	- 1.7
Motor Gasoline	6.6	6.6	1.1	6.6	6.5	0.9
Distillate Fuel Oil	2.8	2.5	15.1	2.6	2.7	- 1.4
Residual Fuel Oil	1.3	1.6	- 18.9	1.4	1.7	- 20.0
Crude Inputs to Refineries	11.9	11.7	1.8	11.7	11.8	- 0.8
Crude Oil and Natural Gas Liquids Production	10.2	10.3	- 0.8	10.2	10.2	0.3
Net Imports <sup>1</sup>	4.5	5.0	- 9.0	4.2	4.3	- 2.5
Net Crude Oil Imports <sup>2</sup>	3.0	3.4	- 10.9	2.9	3.1	- 6.8
SPR Imports	0.1	0.2	- 42.8	0.2	0.2	36.7
Net Product Imports	1.4	1.4	0.2	1.1	1.1	4.2
Crude Oil Stock Withdrawal <sup>3</sup>	0.14	- 0.22	—	0.01	0.02	—
Product Stock Withdrawal	- 0.21	- 0.36	—	0.06	0.25	—
Stocks at End of Period (Million Barrels)						
Crude Oil <sup>2</sup>	349	358	NM			
Motor Gasoline <sup>3</sup>	231	230	NM			
Distillate Fuel Oil	162	186	NM			
Residual Fuel Oil	51	66	NM			
Total Product	777	808	NM			
SPR	371	290	28.0			
Total	1,497	1,455	NM			

<sup>1</sup>Gross imports of crude oil including Strategic Petroleum Reserve (SPR) and petroleum products less exports of crude oil and petroleum products.

<sup>2</sup>Excluding SPR.

<sup>3</sup>Including blending components.

NM = Not meaningful due to new stock basis.

Note: Percent changes are based on unrounded values. November 1983 data are estimates based on weekly data, except for export and Natural Gas Liquids Production estimates which are October 1983 monthly values. Totals may not be equal to sum of components due to independent rounding.

Source: Energy Information Administration, *Petroleum Supply Monthly*, December 1983.



# National Petroleum Council Revises Minimum Operating Inventory Estimates

At the request of the Secretary of Energy, the National Petroleum Council (NPC) has developed revised estimates of minimum operating inventories and storage capacities for crude oil and selected refined petroleum products.<sup>1</sup> This article presents these newest estimates, compares them with previous levels, and summarizes the major factors identified by the NPC as contributing to observed changes in total inventory levels.

The NPC presented its findings last month in *Petroleum Inventories and Storage Capacity—An Interim Report*. This report focuses on inventories maintained within the primary petroleum distribution system, i.e., at refineries and bulk terminals, and in pipelines. Copies of the report are available from the NPC.\* A final report, extending the analysis to the secondary (or local) distribution system and the tertiary (or consumer) segment of the market, is scheduled for release in the spring of 1984.

## Minimum Operating Inventories

The minimum operating inventory (MOI) is defined as the inventory level below which operating problems and shortages would begin to appear in a defined distribution system. In presenting its revised MOI estimates, the NPC stresses that the MOI is a concept rather than a precisely measurable quantity. This limitation aside, the NPC analysis indicates that MOI's associated with the primary distribution system have declined from levels estimated in a 1979 NPC report.<sup>2</sup> This decline parallels the decline in total primary inventories reported to the Energy Information Administration over this period. MOI estimates from the 1979 and 1983 studies are compared in Table 1.

**Table 1. Minimum Operating Inventory Estimates (Million Barrels)**

	1979	1983		
	Total U.S.	PAD District I-IV	PAD District V	Total U.S.
Crude Oil <sup>a</sup>	290	215	<sup>b</sup> 70	285
Motor Gasoline	210	176	24	200
Kerosene	<sup>c</sup> 35	5	<sup>(s)</sup>	5
Kero-Jet Fuel		20	5	25
Distillate Fuel Oil	125	97	8	105
Residual Fuel Oil	60	34	6	40
<b>Total Crude Oil and Products Surveyed</b>	<b>720</b>	<b>547</b>	<b>113</b>	<b>660</b>

<sup>a</sup>Crude oil stored in the Strategic Petroleum Reserve is not counted in the MOI.

<sup>b</sup>All Alaskan crude oil in transit by water is included in PAD District V.

<sup>c</sup>Kerosene and Kero-Jet Fuel were combined in the 1979 NPC report.

<sup>(s)</sup>Less than 0.5 million barrels.

Source: National Petroleum Council.

The NPC study was directed by the NPC Committee on Petroleum Inventories and Storage Capacity. MOI estimates for the study were developed through a decision-making process that relied on the judgment of Committee members based on their operating experience, on historical inventory trends, and on the results of an NPC survey of companies that also provide primary inventory data to the Energy Information Administration. The NPC survey requested company-wide information on total inventories, minimum operating inventories, active and idle storage capacity, and maximum operating inventories. Survey results, aggregated by Petroleum Administration for Defense (PAD) Districts are presented in an appendix to the report.

The NPC identified structural changes in the distribution system caused by the shutdown of some refinery, pipeline, and tankage capacity as the most important reason for the decline in MOI's. These structural changes represent a response to declining petroleum demand, fostered in turn by a decrease in general economic growth, a significant increase in the price of petroleum, and consumer conservation and fuel switching. The MOI, however, is a dynamic rather than static concept, and MOI estimates will continue to change over time in response to factors affecting the industry.

## Total Primary Inventories

The NPC also identified several reasons for the decline in total petroleum inventories since its 1979 study. First, the NPC identified lower product demand as the major reason for the reduction in stocks over this period. Declining demand was induced by higher prices and conservation. Second, the NPC noted that, with declining U.S. petroleum imports, concern about the short-term security of world crude oil supplies has eased, and the need for precautionary stocks held above the MOI has diminished. Third, higher petroleum prices and interest rates increased the real costs<sup>3</sup> of storing product, providing further incentive for firms to lower their inventory levels. For example, gasoline storage costs increased from an average of 10 cents per gallon per year in 1978 to 21 cents per gallon per year in 1982. Finally, downward price expectations in the spring of 1983 may have motivated some short-term stock drawdown.

<sup>1</sup>The National Petroleum Council serves as an advisory committee to the Secretary of Energy for the study of specific issues. The Council is subject to the provisions of the Federal Advisory Committee Act of 1972.

<sup>2</sup>National Petroleum Council, *Petroleum Storage and Transportation Capacities*, Volume II, *Inventory and Storage*, Washington, D.C., 1979.

<sup>3</sup>The National Petroleum Council estimated storage costs as the sum of the fee for commercial storage space and the economic cost of holding product—estimated, in turn, as the short-term interest rate times the wholesale price of the product.

\*To order, write to the National Petroleum Council, 1625 K St., N.W., Washington, D.C. 20006.

Table 2 presents inventory levels evaluated in the 1979 and 1983 NPC reports. These data represent stocks on hand for the fall and spring to indicate the seasonality of product storage.

**Table 2. U.S. Inventory of Crude Oil and Selected Refined Products (Million Barrels)**

	March 31, 1978	March 31, 1983 <sup>a</sup>
Crude Oil <sup>b</sup>	345.5	358.2
Motor Gasoline	259.6	223.9
Kerosene	11.9	8.9
Kero-Jet Fuel	26.2	34.9
Distillate Fuel Oil	137.8	118.7
Residual Fuel Oil	62.4	46.3
<b>Total Crude Oil and Products Surveyed</b>	<b>843.3</b>	<b>790.9</b>
	Sept. 30, 1978	Sept. 30, 1982
Crude Oil <sup>b</sup>	321.2	340.7
Motor Gasoline	216.5	233.6
Kerosene	16.1	9.8
Kero-Jet Fuel	29.3	33.3
Distillate Fuel Oil	220.7	161.2
Residual Fuel Oil	81.3	61.7
<b>Total Crude Oil and Products Surveyed</b>	<b>885.1</b>	<b>840.5</b>

<sup>a</sup>Includes resubmissions to the Energy Information Administration as of August 10, 1983.

<sup>b</sup>Excludes Strategic Petroleum Reserve storage.

Note: Totals may not equal sum of components due to independent rounding.

Source: Data reported to the Energy Information Administration on Forms EIA-810-813 in 1983, Forms EIA-87-90 in 1982, and Forms FEA-P320-P323 in 1978.

Although the NPC survey results were not adequate to quantify the amount by which current inventory levels are influenced by the presence of spare crude oil distillation capacity in the Nation's refineries, the Committee expressed its belief that this spare capacity is a factor in the observed decrease in inventory levels. For example, it was noted that month-to-month variations in distillate and residual fuel oil stocks are exhibiting less seasonality than in past years. The growth of the Strategic Petroleum Reserve and the development of petroleum futures markets, however, are not believed to be influencing primary inventory decisions.

### Primary Storage Capacity

The NPC survey was designed to collect information on the operating limits of the primary distribution system. An upper limit on storage—the maximum quantity that

can be stored without disrupting operation of the distribution system—is referred to as the maximum operating inventory. But, because the limits of the distribution system have not been tested on an industry-wide basis, the Committee did not estimate current maximum operating inventory levels. NPC data on tank capacity, however, is useful for indicating recent trends in storage capabilities. Summary data on active tankage from the 1979 and 1983 NPC surveys are presented in Table 3.

**Table 3. Shell Capacity of Active Tankage (Million Barrels)**

	March 31, 1978	March 31, 1983
Crude Oil <sup>a</sup>	<sup>b</sup> 462	504
Gasoline	464	458
Kerosene	<sup>c</sup> 86	21
Kero-Jet Fuel		68
Distillate Fuel Oil	336	297
Residual Fuel Oil	156	144
<b>Total Crude Oil and Products Surveyed</b>	<b>1,504</b>	<b>1,492</b>

<sup>a</sup>Excludes Strategic Petroleum Reserve storage.

<sup>b</sup>Data for September 30, 1978.

<sup>c</sup>Kerosene and Kero-Jet Fuel were combined in the 1979 NPC report.

Source: National Petroleum Council.

Tankage in operation reported for 1983 is below the 1978 level. Three primary reasons for this decline were noted:

- A reduction in crude oil and product demand caused refinery and terminal shutdowns and tankage consolidation.
- Tankage that was not retrofitted to meet environmental regulations was removed from service.
- Physical deterioration of tankage occurred.

The growth in crude oil storage capacity represents the activation of the Louisiana Offshore Oil Port and the net addition of tankage at refineries and terminals. Concerns about the security of supply in 1979 and 1980 may have prompted construction of crude oil tankage or conversion of product storage to crude oil storage.

Total tank utilization in 1983 was only 40 percent, compared with a 35-year average of 46 percent. The Committee reported that additional storage deactivation is expected in the near future, which would tend to return the percentage utilization figure closer to the historical average.

## Conclusions

Minimum operating inventory estimates prepared periodically by the National Petroleum Council are of great value in assessing the adequacy of total inventories to accommodate a disruption of petroleum supplies or surges in demand (related, for example, to severe weather). To place current inventory statistics in perspective, the Energy Information Administration has presented the Council's 1979 MOI estimates in its *Weekly Petroleum Status Report* (WPSR) for the last 3 years. Beginning with the November 17, 1983 issue, the WPSR presents the Council's latest MOI estimates.

As the NPC report notes, the MOI is not a static figure—it changes with those factors influencing the industry structure. Thus, primary inventories for distillate

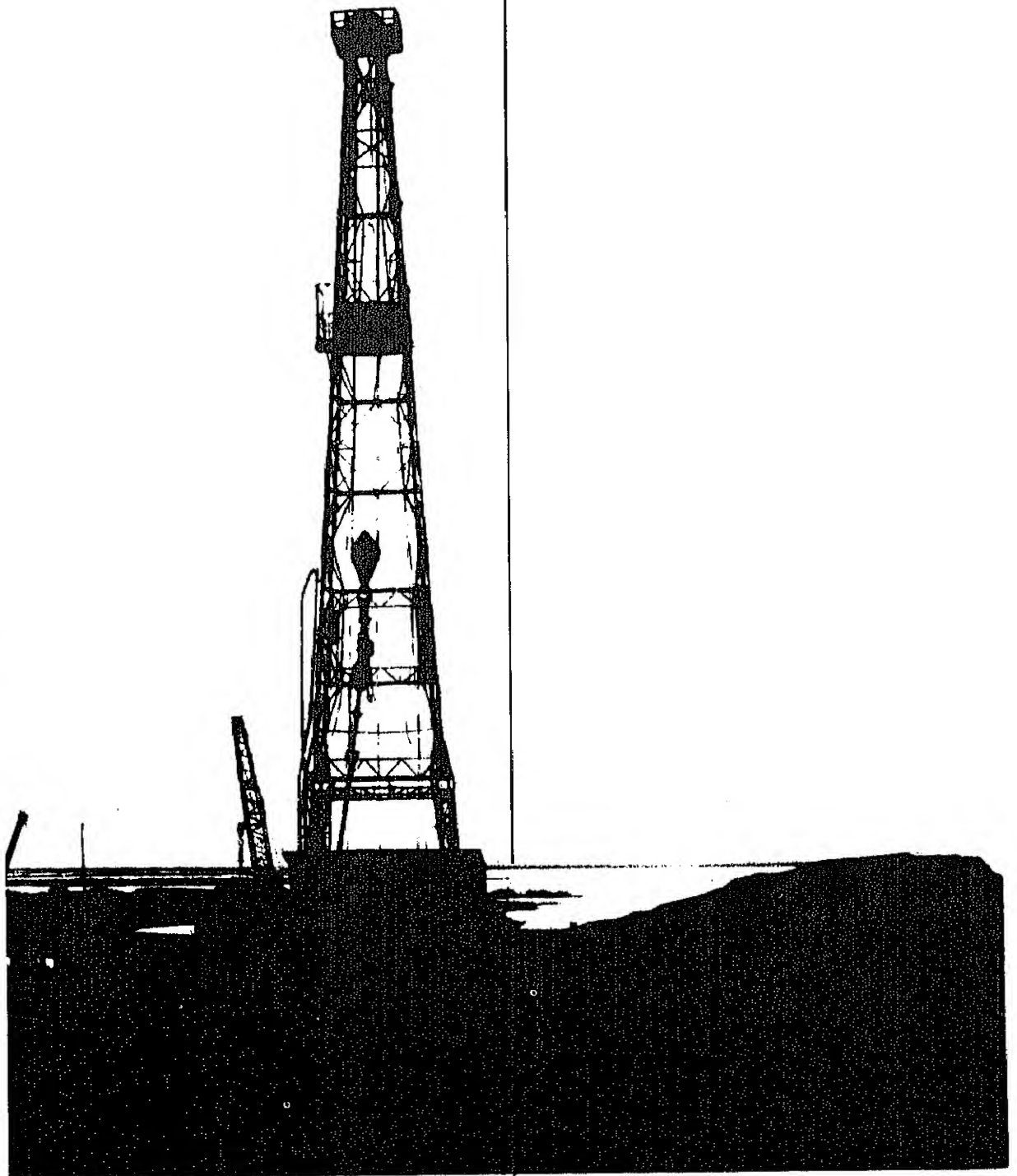
and residual fuel oils have recently fallen substantially below the MOI's established for those fuels in the 1979 NPC inventory study, with no occurrence of distribution problems. That these MOI figures were clearly out of date prompted, in part, the Secretary of Energy's request for revised estimates. Industry conditions influencing MOI's, however, are still in a state of flux. Residual fuel oil MOI's, in particular, continue to respond to decreased economic activity, fuel switching, and changing import levels. Accordingly, increasing care should be exercised over time in utilizing the 1983 MOI estimates presented in this article.

The new NPC inventory study contains additional valuable information on how the revised MOI estimates were derived and on how current inventory data can best be interpreted in light of these new estimates.





# Summary Statistics



# Crude Oil<sup>1</sup> and Petroleum Products Overview

		Field Production			Stock Withdrawal <sup>2</sup>			Ending Stocks <sup>3</sup>
		Total Domestic <sup>4</sup>	Crude Oil	Natural Gas Plant Production	Crude Oil <sup>5</sup>	Petroleum Products	Petroleum Products Supplied	Crude Oil <sup>5</sup> and Petroleum Products
Thousand Barrels per Day								Million Barrels
1973	AVERAGE	10,975	9,208	1,738	11	-146	17,308	1,008
1974	AVERAGE	10,498	8,774	1,688	-62	-117	16,653	<sup>6</sup> 1,074
1975	AVERAGE	10,045	8,375	1,633	-17	-145	16,322	1,133
1976	AVERAGE	9,774	8,132	1,603	-39	96	17,461	1,112
1977	AVERAGE	9,913	8,245	1,618	-170	-378	18,431	1,312
1978	AVERAGE	10,328	8,707	1,567	-78	172	18,847	1,278
1979	AVERAGE	10,179	8,552	1,584	-148	-25	18,513	1,341
1980	AVERAGE	10,214	8,597	1,573	-98	-42	17,056	<sup>6</sup> 1,392
1981	January	10,231	8,540	1,652	50	1,159	18,430	1,388
	February	10,294	8,604	1,653	-278	250	16,989	1,389
	March	10,272	8,613	1,624	-632	224	15,907	1,401
	April	10,195	8,557	1,599	-595	148	15,350	1,415
	May	10,160	8,501	1,593	-391	-374	15,353	1,438
	June	10,287	8,629	1,594	-135	406	16,095	1,430
	July	10,098	8,500	1,548	-360	91	15,682	1,439
	August	10,243	8,583	1,614	397	-999	15,263	1,457
	September	10,281	8,604	1,612	-285	-341	15,655	1,476
	October	10,225	8,563	1,598	-760	477	15,822	1,485
	November	10,269	8,586	1,630	-325	-233	15,593	1,501
	December	10,220	8,585	1,590	-170	745	16,596	1,484
	AVERAGE	10,230	8,572	1,609	-290	130	16,058	
1982	January	10,128	8,509	1,578	-401	1,298	16,124	1,456
	February	10,312	8,702	1,563	-242	1,230	16,001	1,428
	March	10,284	8,667	1,572	121	1,047	15,560	1,392
	April	10,188	8,591	1,542	-37	1,583	16,046	1,346
	May	10,244	8,683	1,518	29	-66	14,847	1,347
	June	10,212	8,646	1,511	40	-489	14,998	1,360
	July	10,229	8,658	1,513	-147	-926	14,821	1,393
	August	10,215	8,634	1,524	-440	-44	14,839	1,408
	September	10,279	8,701	1,518	263	-447	15,022	1,414
	October	10,299	8,701	1,530	-548	-47	14,859	1,432
	November	10,359	8,697	1,609	-398	-361	15,009	1,455
	December	10,276	8,598	1,628	128	688	15,487	<sup>6</sup> 1,430
	AVERAGE	10,252	8,649	1,550	-136	283	15,296	
1983	January	10,356	8,634	1,668	-567	865	14,765	1,453
	February	10,298	8,660	1,585	-382	1,128	14,772	1,432
	March	10,259	8,677	1,544	56	1,765	15,484	1,375
	April	10,229	8,686	1,502	-438	431	14,779	1,376
	May	10,231	8,682	1,483	68	-759	14,250	1,397
	June	10,262	8,676	1,514	-163	-242	15,281	1,409
	July	10,237	8,647	1,536	118	-922	14,913	1,434
	August	10,257	8,653	1,561	-781	-289	15,366	1,467
	September	10,323	8,666	1,598	-191	-634	15,396	1,492
	October*	10,317	8,654	1,604	R -180	R -456	R 14,947	R 1,512
	November**	NA	8,624	NA	8	-209	15,289	1,497
	AVERAGE	NA	8,660	NA	-222	55	15,022	

<sup>1</sup> Includes lease condensate.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Stocks are totals as of end of period.

<sup>4</sup> Includes crude oil, natural gas plant production, other hydrocarbons and alcohol.

<sup>5</sup> Includes stocks located in the Strategic Petroleum Reserve.

<sup>6</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years.

The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-1,121, 1980-1,420 and 1982-1,462.

Stock withdrawals during 1975, 1981 and 1983 are calculated using new basis stock levels.

Totals may not equal sum of components due to independent rounding.

NA = Not available, R = Revised data.

\* See Explanatory Note 9.1.

\*\* Italics denote preliminary data. See Explanatory Note 8.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

**Crude Oil<sup>1</sup> and Petroleum Products Overview (continued)**

		Imports			Exports			
		Total	Crude Oil <sup>2</sup>	Petroleum Products	Total	Crude Oil	Petroleum Products	Net <sup>3</sup> Imports
1973	AVERAGE	6,256	3,244	3,012	231	2	229	6,025
1974	AVERAGE	6,112	3,477	2,635	221	3	218	5,892
1975	AVERAGE	6,056	4,105	1,951	209	6	204	5,846
1976	AVERAGE	7,313	5,287	2,026	223	8	215	7,090
1977	AVERAGE	8,807	6,615	2,193	243	50	193	8,565
1978	AVERAGE	8,363	6,356	2,008	362	158	204	8,002
1979	AVERAGE	8,456	6,519	1,937	472	235	237	7,984
1980	AVERAGE	6,909	5,263	1,646	544	287	258	6,365
1981	January	6,827	4,932	1,895	558	339	219	6,270
	February	6,772	4,873	1,899	569	198	371	6,203
	March	6,028	4,521	1,507	586	210	376	5,442
	April	5,668	4,338	1,330	570	198	372	5,098
	May	5,775	4,287	1,489	595	312	283	5,180
	June	5,435	4,061	1,375	420	123	297	5,015
	July	5,816	4,296	1,521	571	257	314	5,245
	August	5,767	4,179	1,588	644	204	440	5,123
	September	6,365	4,740	1,624	519	194	325	5,845
	October	5,959	4,380	1,579	738	226	512	5,221
	November	5,741	4,046	1,695	701	278	423	5,041
	December	5,843	4,137	1,706	656	189	467	5,187
	AVERAGE	5,996	4,398	1,599	595	228	367	5,401
1982	January	5,332	3,693	1,639	829	238	591	4,503
	February	4,807	2,990	1,817	804	304	499	4,003
	March	4,484	2,874	1,610	882	321	561	3,602
	April	4,378	2,849	1,529	786	174	611	3,593
	May	4,811	3,309	1,503	803	262	542	4,008
	June	5,327	3,836	1,491	703	94	609	4,624
	July	5,890	4,248	1,642	741	229	512	5,149
	August	5,244	3,851	1,392	858	304	554	4,386
	September	5,414	3,636	1,778	791	184	606	4,624
	October	5,306	3,670	1,636	932	270	662	4,374
	November	5,744	3,862	1,882	786	262	524	4,958
	December	4,606	3,000	1,605	860	193	667	3,746
	AVERAGE	5,113	3,488	1,625	815	236	579	4,298
1983	January	4,372	2,938	1,434	973	117	856	3,399
	February	3,691	2,268	1,423	865	262	603	2,825
	March	3,629	2,232	1,398	801	174	627	2,829
	April	4,744	3,154	1,590	809	88	721	3,935
	May	4,898	3,234	1,664	848	280	568	4,049
	June	5,218	3,502	1,716	774	144	630	4,443
	July	5,690	3,868	1,822	571	145	426	5,119
	August	6,036	4,174	1,863	663	172	491	5,373
	September	6,088	4,221	1,867	684	177	507	5,403
	October*	R 5,256	R 3,446	R 1,810	576	140	436	4,680
	November**	5,088	3,290	1,797	NA	NA	NA	NA
	AVERAGE	4,981	3,309	1,673	NA	NA	NA	NA

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Includes crude oil for storage in the Strategic Petroleum Reserve.

<sup>3</sup> Net Imports = Imports minus Exports.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.1.

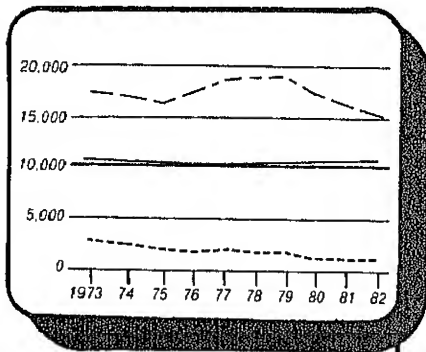
\*\* Italics denote preliminary data. See Explanatory Note 8.

Geographic coverage: The 50 United States and the District of Columbia.

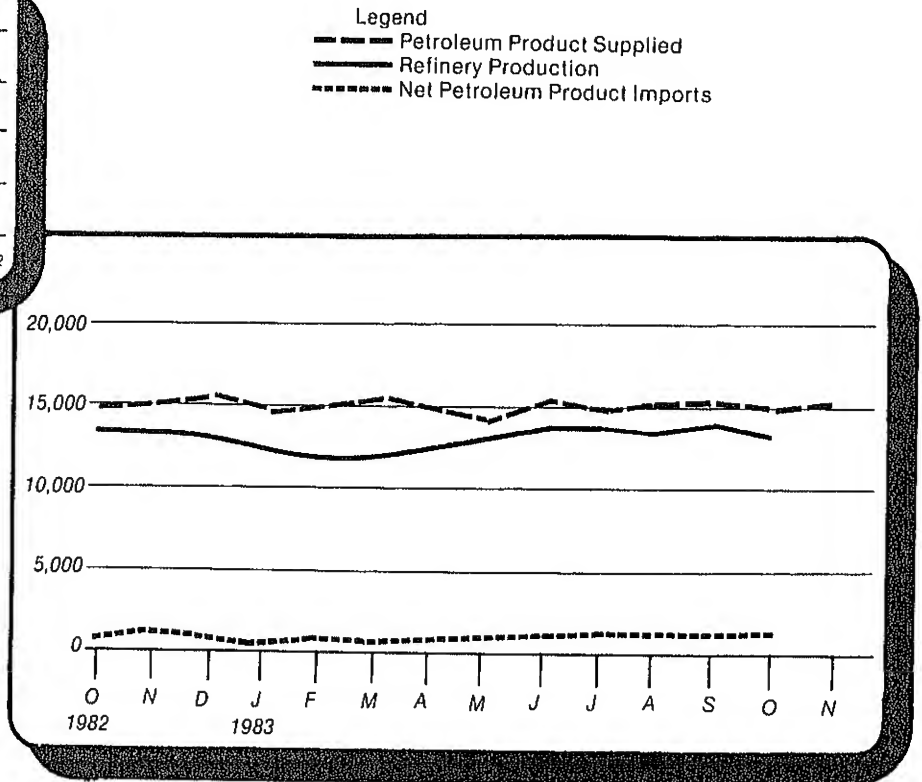
Sources: See "Sources" at the end of this section.

## Petroleum Overview

(Thousand Barrels Per Day)



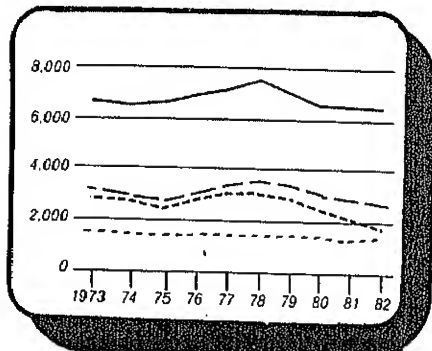
Annual



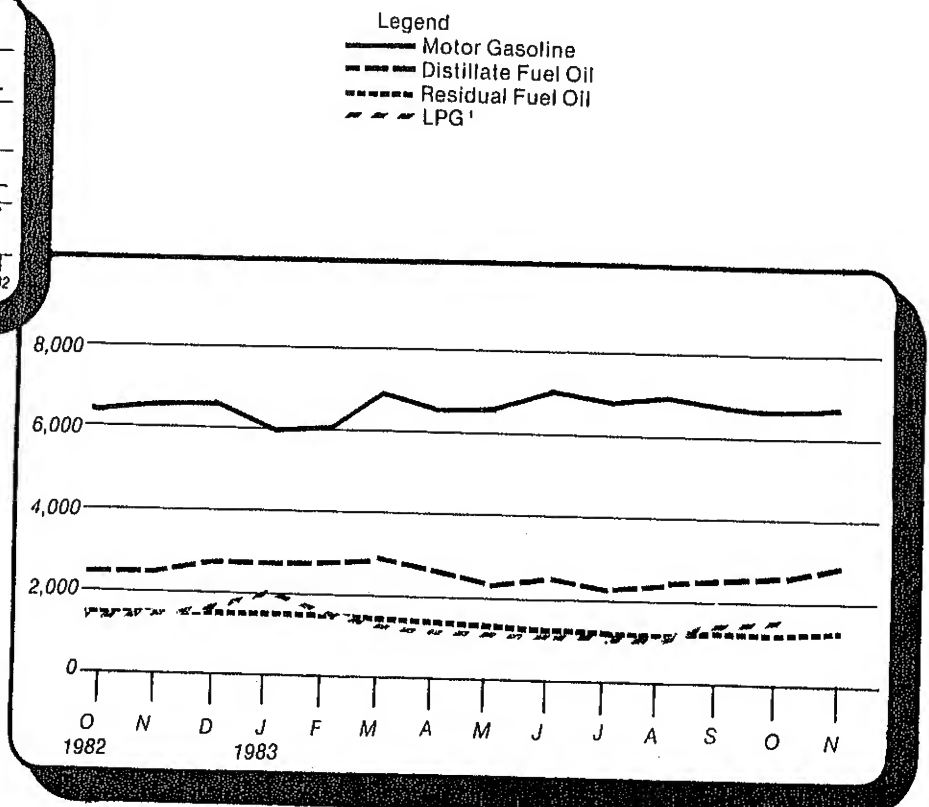
Monthly

## Petroleum Products Supplied

(Thousand Barrels Per Day)



Annual

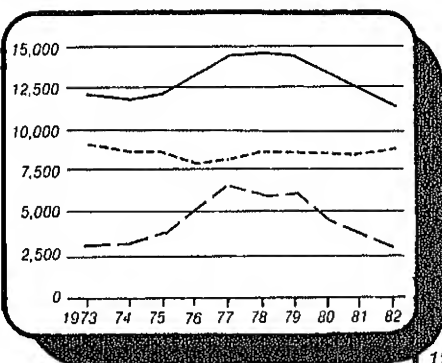


Monthly

Qualified Petroleum Gases

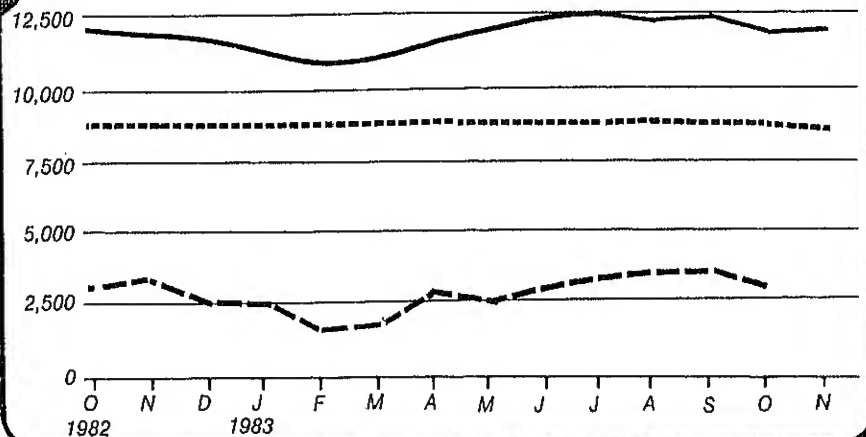
## Crude Oil Supply and Disposition

(Thousand Barrels Per Day)



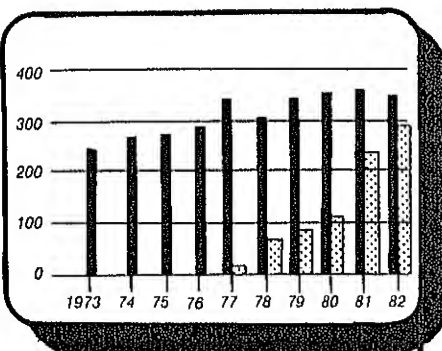
<sup>1</sup> Excludes SPR Imports

Legend  
 — Refinery Inputs  
 - - Domestic Crude Oil Production  
 - · Net Imports <sup>1</sup>



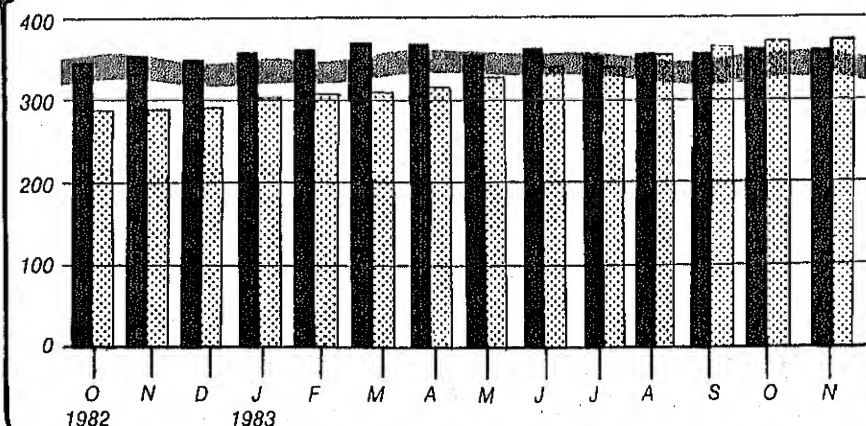
## Crude Oil Ending Stocks

(Millions of Barrels)



<sup>1</sup> Level and width of Average Stock Ranges for crude oil is based on 3 years of data, July 80-July 83. See Explanatory Note 6.

Legend  
 ■ Other Primary  
 ■ SPR  
 ■ Average Stock Range<sup>1</sup>



Monthly  
 5

# Crude Oil<sup>1</sup> Supply and Disposition

		Supply							
		Field Production		Imports			Stock Withdrawal <sup>2</sup>		Unac- counted for Crude Oil
		Total Domestic	Alaskan	Total	SPR <sup>3</sup>	Other	SPR <sup>3</sup>	Other	
Thousand Barrels per Day									
1973	AVERAGE	9,208	198	3,244		3,244		11	3
1974	AVERAGE	8,774	193	3,477		3,477		-62	-25
1975	AVERAGE	8,375	191	4,105		4,105		-17	17
1976	AVERAGE	8,132	173	5,287		5,287		-39	77
1977	AVERAGE	8,245	464	6,615	21	6,594	-20	-150	-6
1978	AVERAGE	8,707	1,229	6,356	162	6,195	-163	84	-57
1979	AVERAGE	8,552	1,401	6,519	67	6,452	-67	-81	-11
1980	AVERAGE	8,597	1,617	5,263	44	5,219	-45	-52	34
1981	January	8,540	1,606	4,932	106	4,826	-151	201	113
	February	8,604	1,619	4,873	80	4,793	-127	-150	-41
	March	8,613	1,618	4,521	140	4,382	-155	-477	154
	April	8,557	1,608	4,338	272	4,066	-444	-151	51
	May	8,501	1,580	4,287	386	3,901	-513	122	286
	June	8,629	1,632	4,061	318	3,743	-434	299	49
	July	8,500	1,605	4,296	175	4,121	-324	-36	147
	August	8,583	1,602	4,179	257	3,922	-372	769	16
	September	8,604	1,607	4,740	435	4,305	-486	201	-295
	October	8,563	1,596	4,380	453	3,927	-501	-259	166
	November	8,586	1,614	4,046	271	3,774	-259	-66	279
	December	8,585	1,623	4,137	165	3,971	-252	82	52
	AVERAGE	8,572	1,609	4,396	256	4,141	-336	46	83
1982	January	8,509	1,705	3,693	170	3,523	-159	-242	101
	February	8,702	1,707	2,990	159	2,830	-213	-29	156
	March	8,667	1,696	2,874	185	2,689	-235	357	2
	April	8,591	1,691	2,849	190	2,659	-233	196	231
	May	8,683	1,707	3,309	204	3,105	-176	205	111
	June	8,646	1,665	3,836	105	3,732	-105	144	133
	July	8,658	1,710	4,248	97	4,150	-97	-50	-20
	August	8,634	1,697	3,851	208	3,643	-208	-232	189
	September	8,701	1,705	3,636	139	3,497	-143	406	-210
	October	8,701	1,706	3,670	216	3,454	-216	-332	249
	November	8,697	1,676	3,862	180	3,683	-179	-219	-124
	December	8,598	1,682	3,000	124	2,877	-125	252	35
	AVERAGE	8,649	1,696	3,486	165	3,323	-174	38	71
1983	January	8,634	1,698	2,938	219	2,720	-219	-348	238
	February	8,660	1,725	2,268	197	2,071	-197	-185	423
	March	8,677	1,726	2,232	201	2,031	-184	240	134
	April	8,686	1,710	3,154	205	2,949	-197	-241	191
	May	8,682	1,710	3,234	289	2,945	-293	362	148
	June	8,676	1,710	3,502	190	3,312	-188	25	480
	July	8,647	1,705	3,668	274	3,594	-264	382	-74
	August	8,653	1,712	4,174	350	3,823	-358	-423	333
	September	8,666	1,722	4,221	309	3,912	-307	116	-6
	October*	8,654	1,731	R 3,446	R 202	R 3,244	R -201	R 21	69
	November**	8,624	1,713	3,290	103	3,187	-127	135	NA
	AVERAGE	8,660	1,715	3,309	231	3,077	-231	9	NA

# Crude Oil<sup>1</sup> Supply and Disposition (continued)

		Supply	Disposition				Ending Stocks <sup>2</sup>		
		Crude Used Directly <sup>3</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied <sup>3</sup>	Total Crude Oil	SPR <sup>4</sup>	Other Primary
		Thousand Barrels per Day					Million Barrels		
1973	AVERAGE	-19	13	12,431	2	NA	242		242
1974	AVERAGE	-15	13	12,133	3	NA	<sup>5</sup> 265		<sup>5</sup> 265
1975	AVERAGE	-17	13	12,442	6	NA	271		271
1976	AVERAGE	-18	15	13,416	8	NA	285		285
1977	AVERAGE	-14	16	14,602	50	NA	348	7	340
1978	AVERAGE	-14	16	14,739	158	NA	376	67	309
1979	AVERAGE	-13	16	14,648	235	NA	430	91	339
1980	AVERAGE	-13	15	13,481	287	NA	<sup>5</sup> 466	108	<sup>5</sup> 358
1981	January	-43	6	13,247	339	NA	486	112	374
	February	-55	3	12,902	198	NA	494	116	378
	March	-57	6	12,383	210	NA	514	121	393
	April	-59	3	12,091	198	NA	532	134	397
	May	-59	3	12,309	312	NA	544	150	394
	June	-58	7	12,415	123	NA	548	163	385
	July	-58	7	12,261	257	NA	559	173	386
	August	-58	5	12,908	204	NA	547	185	362
	September	-61	4	12,505	194	NA	555	199	356
	October	-63	3	12,057	226	NA	579	215	364
	November	-64	4	12,240	278	NA	589	223	366
	December	-63	4	12,349	189	NA	594	230	363
	AVERAGE	-58	5	12,470	228	NA			
1982	January	-63	3	11,599	238	NA	606	235	371
	February	-64	2	11,236	304	NA	613	241	372
	March	-63	5	11,276	321	NA	609	249	361
	April	-65	3	11,392	174	NA	610	256	355
	May	-62	3	11,806	262	NA	609	261	348
	June	-60	7	12,494	94	NA	608	264	344
	July	-60	3	12,446	229	NA	613	267	346
	August	-57	2	11,871	304	NA	626	274	353
	September	-56	4	12,146	184	NA	619	278	341
	October	-51	2	11,749	270	NA	636	285	351
	November	-51	1	11,724	262	NA	648	290	358
	December	-53	1	11,514	193	NA	<sup>5</sup> 644	294	<sup>5</sup> 350
	AVERAGE	-59	3	11,774	236	NA			
1983	January	NA	2	11,070	117	54	661	301	361
	February	NA	3	10,635	262	69	672	306	366
	March	NA	2	10,854	174	70	670	312	359
	April	NA	2	11,436	88	68	684	318	366
	May	NA	1	11,789	280	63	681	327	355
	June	NA	1	12,287	144	64	686	332	354
	July	NA	2	12,347	145	65	683	341	342
	August	NA	1	12,141	172	64	707	352	355
	September	NA	1	12,445	177	66	713	361	352
	October*	NA	1	R 11,784	140	63	R 718	R 367	R 351
	November**	NA	NA	11,939	NA	NA	720	371	349
	AVERAGE	NA	NA	11,708	NA	NA			

<sup>1</sup> Includes lease condensate.

<sup>2</sup> Stocks are totals as of end of period.

<sup>3</sup> Beginning in January 1983, crude oil used directly as fuel is presented as product supplied for crude oil. Prior to January 1983 crude oil used directly was included with crude oil losses in this table and with product supplied for distillate and residual fuel oils.

<sup>4</sup> Strategic Petroleum Reserve.

<sup>5</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years.

The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis) end of year stocks would be: 1974-265, 1980-483 (Total) and 375 (Other Primary), and 1982-644 (Total) and 350 (Other Primary).

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.2.

\*\* Italics denote preliminary data. See Explanatory Note 8.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.



# Crude Oil and Petroleum Product Imports

		Imports from OPEC Sources <sup>1</sup>										
		Algeria	Libya	Saudi Arabia	United Arab Emirates	Indonesia	Iran	Nigeria	Venezuela	Other OPEC <sup>2</sup>	Total OPEC	Total Arab OPEC <sup>3</sup>
		Thousand Barrels per Day										
1973	AVERAGE	136	164	486	71	213	223	459	1,135	106	2,993	915
1974	AVERAGE	190	4	461	74	300	469	713	979	88	3,280	752
1975	AVERAGE	282	232	715	117	390	280	762	702	122	3,601	1,383
1976	AVERAGE	432	453	1,230	254	539	298	1,025	700	134	5,066	2,424
1977	AVERAGE	559	723	1,380	335	541	535	1,143	690	287	6,193	3,185
1978	AVERAGE	649	654	1,144	385	573	555	919	645	226	5,751	2,963
1979	AVERAGE	636	658	1,356	281	420	304	1,080	690	212	5,637	3,056
1980	AVERAGE	488	554	1,261	172	348	9	857	481	130	4,300	2,551
1981	January	341	500	1,284	93	424	0	908	549	27	4,127	2,219
	February	381	468	1,122	93	406	0	866	463	92	3,891	2,064
	March	352	485	1,027	47	328	0	771	360	54	3,425	1,912
	April	263	485	1,034	68	307	0	812	237	39	3,245	1,867
	May	393	443	933	17	297	0	664	331	124	3,203	1,796
	June	356	380	865	60	367	0	528	248	118	2,922	1,703
	July	333	251	1,073	80	340	0	651	466	38	3,233	1,757
	August	348	274	1,082	61	377	0	321	523	84	3,070	1,765
	September	336	154	1,477	96	371	0	323	359	149	3,264	2,063
	October	242	147	1,342	90	427	0	412	389	172	3,220	1,820
	November	210	132	1,270	112	353	0	517	535	56	3,184	1,724
	December	176	122	1,045	158	400	0	684	411	132	3,129	1,502
	AVERAGE	311	319	1,129	81	366	0	620	406	90	3,323	1,848
1982	January	254	161	877	111	289	0	663	376	128	2,859	1,403
	February	139	92	693	89	244	0	584	355	102	2,297	1,054
	March	91	37	555	155	200	0	522	399	91	2,051	860
	April	85	0	511	122	215	0	427	426	85	1,871	740
	May	179	0	601	116	236	0	222	422	54	1,830	897
	June	115	0	593	94	215	72	537	361	110	2,096	820
	July	159	0	660	108	327	69	910	356	95	2,685	965
	August	181	0	489	133	271	27	574	299	133	2,107	818
	September	179	0	432	57	191	21	477	518	69	1,943	677
	October	249	7	494	61	242	108	313	504	106	2,084	810
	November	247	14	489	47	283	34	479	528	115	2,235	797
	December	155	0	237	12	265	88	462	399	73	1,690	421
	AVERAGE	170	26	552	92	248	35	514	412	97	2,146	854
1983	January	204	0	282	47	255	43	186	324	43	1,384	533
	February	104	0	214	9	217	0	92	371	28	1,035	326
	March	63	0	103	0	138	0	121	425	173	1,023	183
	April	228	0	180	( <sup>4</sup> )	210	0	186	508	125	1,438	409
	May	284	0	122	12	324	37	352	444	69	1,645	419
	June	300	0	175	40	502	38	402	335	146	1,938	515
	July	282	0	182	58	464	112	525	431	187	2,240	599
	August	370	0	426	45	416	213	464	477	230	2,641	866
	September	413	0	587	21	516	86	324	472	208	2,627	1,074
	October	261	0	638	16	368	12	307	337	169	2,108	938
	AVERAGE	252	0	291	25	341	55	298	413	139	1,814	588

<sup>1</sup> Excludes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products which were refined from crude oil produced in OPEC countries.

<sup>2</sup> Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

<sup>3</sup> Includes Algeria, Libya, Saudi Arabia, United Arab Emirates, Iraq, Kuwait, and Qatar.

(<sup>4</sup>) Less than 500 barrels.

Footnotes continued on following page.

# Crude Oil and Petroleum Product Imports ( continued )

		Imports from NON-OPEC Sources <sup>4</sup>										
		Baha- mas	Canada	Mexico	Nether- lands Antilles	Trinida and Tobago	United Kingdom	Puerto Rico	Virgln Islands	Other NON OPEC	Total NON OPEC	Total Imports
		Thousand Barrels per Day										
1973	AVERAGE	174	1,325	16	585	255	15	99	329	465	3,263	6,256
1974	AVERAGE	164	1,070	8	511	251	8	90	391	340	2,832	6,112
1975	AVERAGE	152	846	71	332	242	14	90	406	300	2,454	6,056
1976	AVERAGE	118	599	87	275	274	31	88	422	353	2,247	7,313
1977	AVERAGE	171	517	179	211	289	126	105	466	550	2,614	8,807
1978	AVERAGE	160	467	318	229	253	180	94	429	484	2,613	8,363
1979	AVERAGE	147	538	439	231	190	202	92	431	548	2,819	8,456
1980	AVERAGE	78	455	533	225	176	176	88	388	491	2,609	6,909
1981	January	39	543	401	198	150	233	89	494	552	2,701	6,827
	February	84	546	437	227	163	271	46	481	626	2,881	6,772
	March	74	472	488	227	93	263	45	370	571	2,603	6,028
	April	68	412	418	198	139	402	40	365	380	2,423	5,668
	May	122	365	522	213	105	368	58	344	474	2,573	5,775
	June	51	353	538	196	124	397	67	262	525	2,513	5,435
	July	77	382	384	212	178	553	50	206	541	2,583	5,816
	August	69	378	489	255	123	592	68	184	539	2,698	5,767
	September	111	423	708	163	169	528	72	265	661	3,100	6,365
	October	63	449	669	161	121	351	60	303	562	2,739	5,959
	November	63	547	628	168	108	253	76	294	421	2,557	5,741
	December	70	501	587	148	125	280	73	367	563	2,714	5,843
	AVERAGE	74	447	522	197	133	375	62	327	534	2,672	5,996
1982	January	58	513	425	179	106	346	62	334	452	2,474	5,332
	February	67	537	476	221	120	181	38	362	508	2,510	4,807
	March	43	437	503	189	118	294	62	307	480	2,433	4,484
	April	82	360	476	184	166	247	36	266	690	2,507	4,378
	May	77	419	766	152	95	516	47	302	607	2,981	4,811
	June	32	481	797	148	129	557	58	322	708	3,231	5,327
	July	64	536	783	158	118	433	38	376	698	3,204	5,890
	August	80	443	853	145	106	520	24	317	650	3,137	5,244
	September	92	493	897	195	89	631	51	278	746	3,472	5,414
	October	45	459	682	148	109	666	52	262	801	3,222	5,306
	November	51	553	860	212	90	623	81	334	706	3,508	5,744
	December	88	561	689	174	102	438	48	336	480	2,916	4,606
	AVERAGE	65	482	685	175	112	456	50	316	627	2,968	5,113
1983	January	68	536	849	218	73	315	40	299	588	2,988	4,372
	February	92	592	722	179	81	193	50	192	554	2,655	3,691
	March	86	488	760	187	78	240	43	162	563	2,606	3,629
	April	167	452	981	216	85	421	20	183	781	3,306	4,744
	May	135	501	944	153	108	483	42	235	651	3,252	4,898
	June	137	576	831	181	120	424	48	252	712	3,281	5,218
	July	69	633	849	191	103	369	37	364	836	3,450	5,690
	August	142	540	891	194	90	461	40	313	725	3,395	6,036
	September	137	523	832	251	82	472	33	308	822	3,461	6,088
	October	164	539	771	172	106	414	48	370	565	3,149	5,256
	AVERAGE	120	537	844	194	93	381	40	269	680	3,157	4,971

(\*) Less than 500 barrels.

<sup>4</sup> Includes petroleum imported into the United States indirectly from OPEC countries, primarily from Caribbean and West European areas, as refined petroleum products which were refined from crude oil produced in OPEC countries.

Note: Beginning in October 1977, Strategic Petroleum Reserve Imports are included.

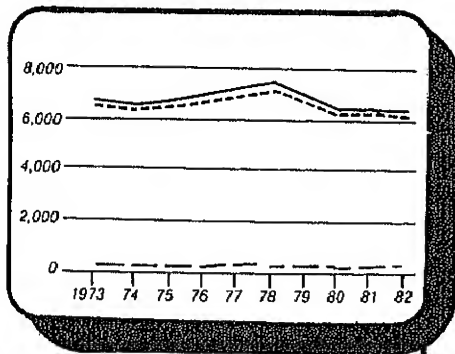
Totals may not equal sum of components due to independent rounding.

Geographic coverage: The 50 United States and the District of Columbia.

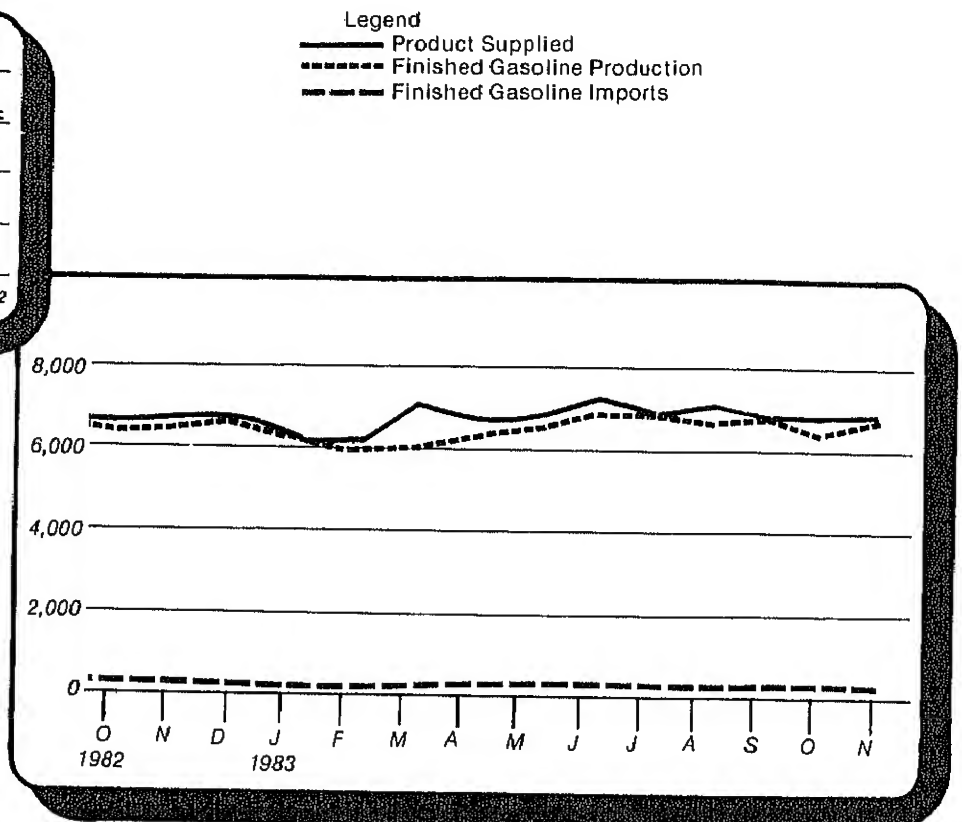
Sources: See "Sources" at the end of this section.

## Motor Gasoline Supply and Disposition

(Thousand Barrels Per Day)



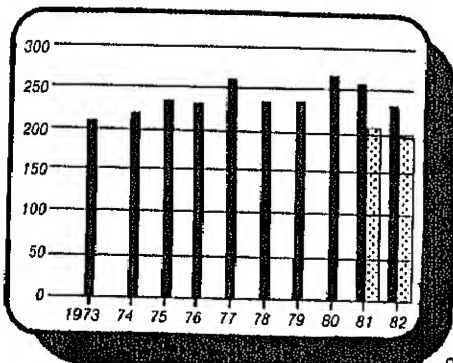
Annual



## Motor Gasoline Ending Stocks

Monthly

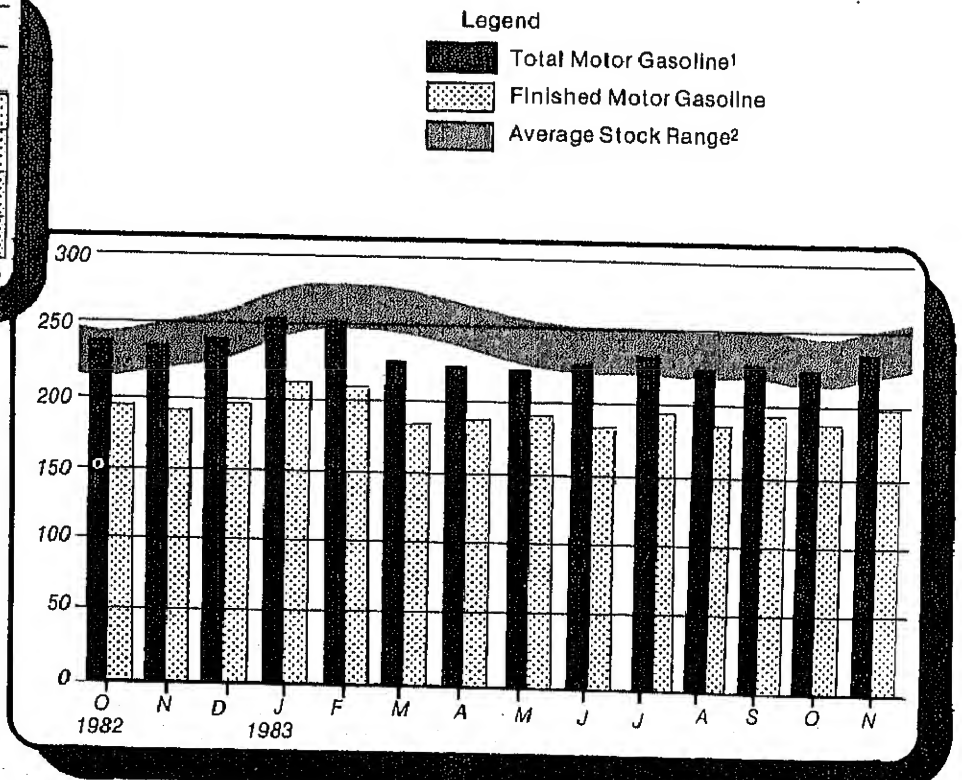
(Millions of Barrels)



Annual

<sup>1</sup> Includes finished motor gasoline blending components

<sup>2</sup> Level and width of Average Stock Range for total motor gasoline based on 3 years of data, July 80-June 83. See Explanatory Note 6.



Monthly

# Finished Motor Gasoline Supply and Disposition

		Supply			Disposition				Ending Stocks <sup>1</sup>	
		Total Produc- tion	Imports <sup>2</sup>	Stock With- drawal <sup>2 3</sup>	Exports	Product Supplied			Total Motor Gasoline <sup>4</sup>	Finished Motor Gasoline
						Total	Unleaded <sup>5</sup>	Unleaded		
Thousand Barrels per Day								Percent of Total	Million Barrels	
1973	AVERAGE	6,535	134	9	4	6,674	NA	NA	209	
1974	AVERAGE	6,360	204	-24	2	6,537	NA	NA	<sup>6</sup> 218	
1975	AVERAGE	6,520	184	-28	2	6,675	NA	NA	235	
1976	AVERAGE	6,841	131	10	3	6,978	NA	NA	231	
1977	AVERAGE	7,033	217	-72	2	7,177	1,976	27.5	258	
1978	AVERAGE	7,169	190	54	1	7,412	2,521	34.0	238	
1979	AVERAGE	6,852	181	2	( <sup>s</sup> )	7,034	2,798	39.8	237	
1980	AVERAGE	6,506	140	-66	1	6,579	3,067	46.6	<sup>6</sup> 261	
1981	January	6,715	138	-421	( <sup>s</sup> )	6,431	3,141	48.8	276	227
	February	6,308	111	-118	1	6,301	3,095	49.1	284	230
	March	6,213	171	-81	( <sup>s</sup> )	6,303	3,097	49.1	285	232
	April	6,114	186	303	( <sup>s</sup> )	6,602	3,284	49.7	272	223
	May	6,122	150	344	1	6,615	3,115	47.1	259	213
	June	6,220	186	622	1	7,028	3,419	48.6	242	194
	July	6,405	151	268	( <sup>s</sup> )	6,823	3,424	50.2	228	186
	August	6,611	124	-95	3	6,637	3,344	50.4	233	189
	September	6,564	169	-70	2	6,662	3,338	50.1	237	191
	October	6,426	147	7	3	6,578	3,257	49.5	236	190
	November	6,564	148	-338	1	6,373	3,198	50.2	248	201
	December	6,586	197	-91	11	6,681	3,444	51.5	253	203
	AVERAGE	6,405	157	28	2	6,588	3,264	49.5		
1982	January	6,167	128	-316	18	5,961	3,067	51.5	261	213
	February	5,899	133	172	8	6,196	3,210	51.8	257	208
	March	5,994	183	334	44	6,466	3,358	51.9	247	198
	April	6,095	185	650	33	6,897	3,495	50.7	221	179
	May	6,319	182	177	23	6,655	3,415	51.3	214	173
	June	6,754	230	-134	14	6,835	3,565	52.2	219	177
	July	6,768	225	-178	24	6,790	3,577	52.7	226	183
	August	6,419	291	-81	16	6,614	3,526	53.3	227	185
	September	6,527	223	-198	22	6,531	3,404	52.1	234	191
	October	6,262	185	-42	15	6,391	3,351	52.4	234	192
	November	6,273	211	101	11	6,574	3,451	52.5	230	189
	December	6,542	178	-165	7	6,549	3,485	53.2	<sup>6</sup> 235	<sup>6</sup> 194
	AVERAGE	6,338	197	25	20	6,539	3,409	52.1		
1983	January	6,020	148	-186	( <sup>s</sup> )	5,981	3,352	56.0	251	208
	February	5,848	142	32	( <sup>s</sup> )	6,022	3,257	54.1	251	207
	March	5,897	205	765	23	6,843	3,620	52.9	224	184
	April	6,202	273	27	1	6,501	3,505	53.9	221	183
	May	6,386	284	-128	1	6,540	3,547	54.2	225	187
	June	6,646	265	118	22	7,008	3,796	54.2	223	183
	July	6,704	297	-210	18	6,773	3,752	55.4	231	190
	August	6,539	260	159	13	6,946	3,836	55.2	226	185
	September	6,582	285	-160	14	6,693	3,671	54.8	230	190
	October*	R 6,188	R 335	R 60	2	R 6,581	3,698	56.2	R 228	R 88
	November**	6,645	295	-278	NA	6,649	NA	NA	231	194
	AVERAGE	6,335	254	19	NA	6,598	NA	NA		

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> Beginning in 1981, excludes blending components.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> Includes motor gasoline blending components.

<sup>5</sup> Includes gasohol.

<sup>6</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-225, 1980-263, 1982-244 (Total) and 203 (Finished). Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

(<sup>s</sup>) = Less than 500 barrels per day. NA = Not available. R = Revised data.

\* See Explanatory Note 9.3.

\*\* Italics denote preliminary data. See Explanatory Note 8.

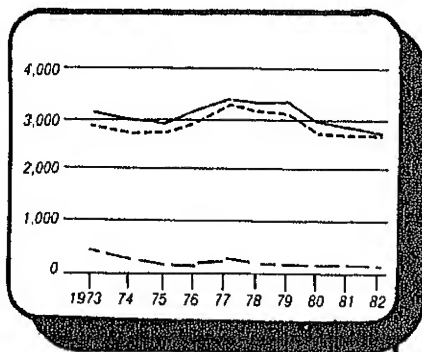
Note: Beginning in January 1981, survey forms were modified.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

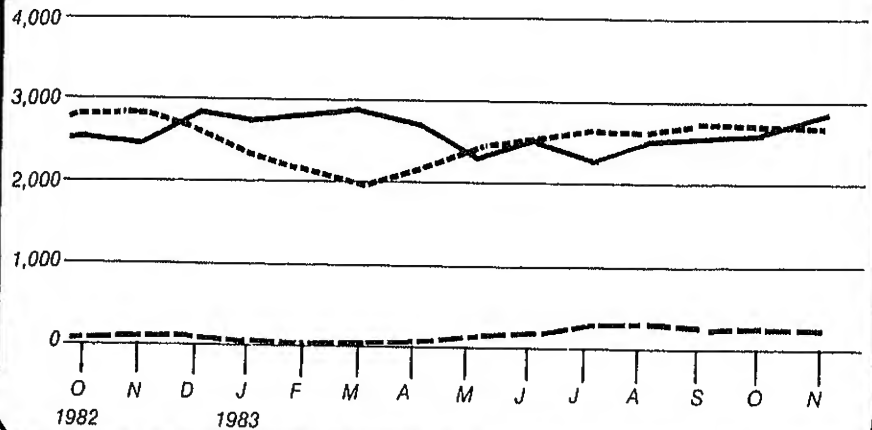
## Distillate Fuel Oil Supply and Disposition

(Thousand Barrels Per Day)



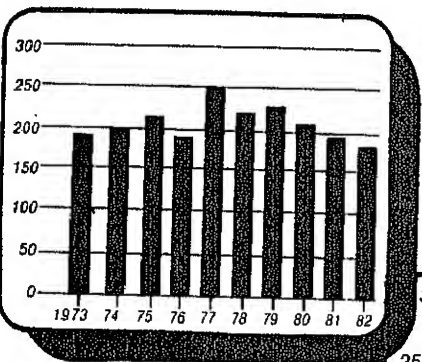
Annual

Legend  
 — Product Supplied  
 - - - Total Production  
 . . . Imports



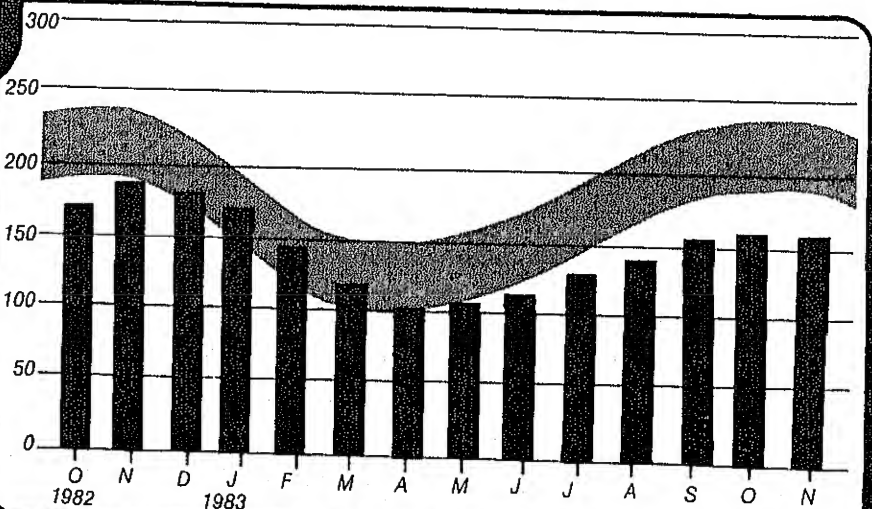
## Distillate Fuel Oil Ending Stocks

(Millions of Barrels)



Annual

Legend  
 [Shaded Area] Average Stock Range<sup>1</sup>



<sup>1</sup> Level and width of Average Stock Range for distillate fuel oil is based on 3 years of data, July 80-July 83. See Explanatory Note 6.

Monthly

Monthly

# Distillate Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly <sup>3</sup>	Exports	Products Supplied <sup>3</sup>	
		Thousand Barrels per Day						Million Barrels
1973	AVERAGE	2,822	392	-115	2	9	3,092	196
1974	AVERAGE	2,669	289	-9	2	2	2,948	<sup>4</sup> 200
1975	AVERAGE	2,654	155	40	2	1	2,851	209
1976	AVERAGE	2,924	146	62	1	1	3,133	186
1977	AVERAGE	3,276	250	-176	1	1	3,352	250
1978	AVERAGE	3,167	173	93	1	3	3,432	216
1979	AVERAGE	3,153	193	-34	1	3	3,311	229
1980	AVERAGE	2,662	142	64	1	3	2,866	<sup>4</sup> 205
1981	January	2,989	273	836	11	(s)	4,109	179
	February	2,809	325	246	11	17	3,373	173
	March	2,484	147	264	9	(s)	2,904	164
	April	2,418	116	-9	10	3	2,532	165
	May	2,454	179	-232	10	(s)	2,411	172
	June	2,501	225	-270	9	(s)	2,464	180
	July	2,395	179	-204	10	2	2,378	186
	August	2,656	174	-450	8	(s)	2,388	200
	September	2,610	129	-235	10	1	2,513	207
	October	2,485	119	197	9	5	2,803	201
	November	2,716	124	36	11	6	2,880	200
	December	2,856	95	277	11	26	3,212	192
	AVERAGE	2,613	173	38	10	5	2,829	
1982	January	2,591	97	876	10	90	3,484	164
	February	2,427	132	605	11	90	3,085	147
	March	2,288	48	682	10	84	2,945	126
	April	2,358	59	612	13	64	2,978	108
	May	2,618	74	-183	10	75	2,444	114
	June	2,729	102	-335	10	55	2,452	124
	July	2,734	125	-789	11	24	2,058	148
	August	2,507	80	-339	10	40	2,218	159
	September	2,657	61	-85	12	139	2,507	161
	October	2,838	91	-289	8	66	2,581	170
	November	2,860	145	-514	8	24	2,475	186
	December	2,655	109	225	10	143	2,855	<sup>4</sup> 179
	AVERAGE	2,606	93	35	10	74	2,671	
1983	January	2,314	58	561	NA	173	2,760	168
	February	2,136	58	742	NA	105	2,832	147
	March	1,991	42	926	NA	59	2,900	119
	April	2,169	73	518	NA	47	2,713	103
	May	2,444	141	-193	NA	50	2,341	109
	June	2,545	175	-154	NA	40	2,526	114
	July	2,600	259	-556	NA	55	2,248	131
	August	2,612	302	-403	NA	43	2,467	144
	September	2,725	253	-374	NA	37	2,568	155
	October*	R 2,682	R 255	R -275	NA	55	R 2,606	R 163
	November**	2,673	222	-7	NA	NA	2,848	162
	AVERAGE	2,446	168	66	NA	NA	2,617	

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Beginning in January 1983, product supplied for distillate fuel oil does not include crude oil used directly. See Explanatory Note 4.

<sup>4</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-224, 1980-205, and 1982-186. Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

(s) = Less than 500 barrels per day. NA = Not available. R = Revised data.

Totals may not equal sum of components due to independent rounding.

\* See Explanatory Note 9.4.

\*\* Italics denote preliminary data. See Explanatory Note 8.

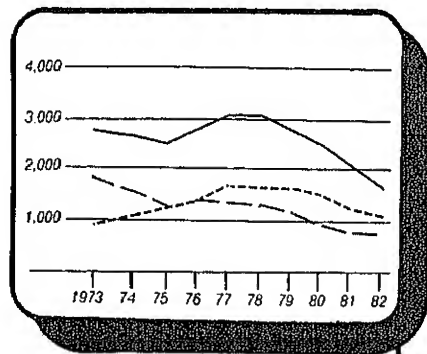
Note: Beginning in January 1981, survey forms were modified.

Geographic Coverage: The 50 United States and the District of Columbia.

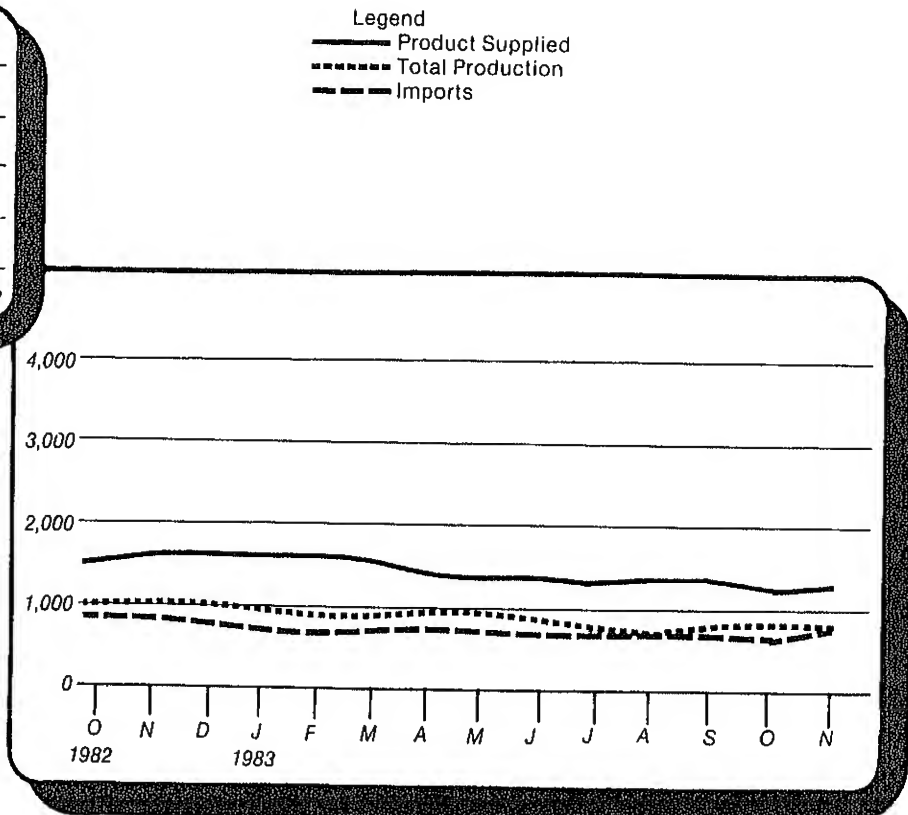
Sources: See "Sources" at the end of this section.

## Residual Fuel Oil Supply and Disposition

(Thousand Barrels Per Day)



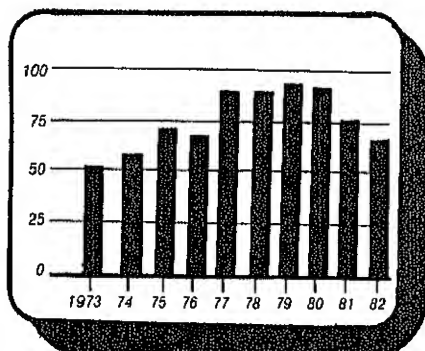
Annual



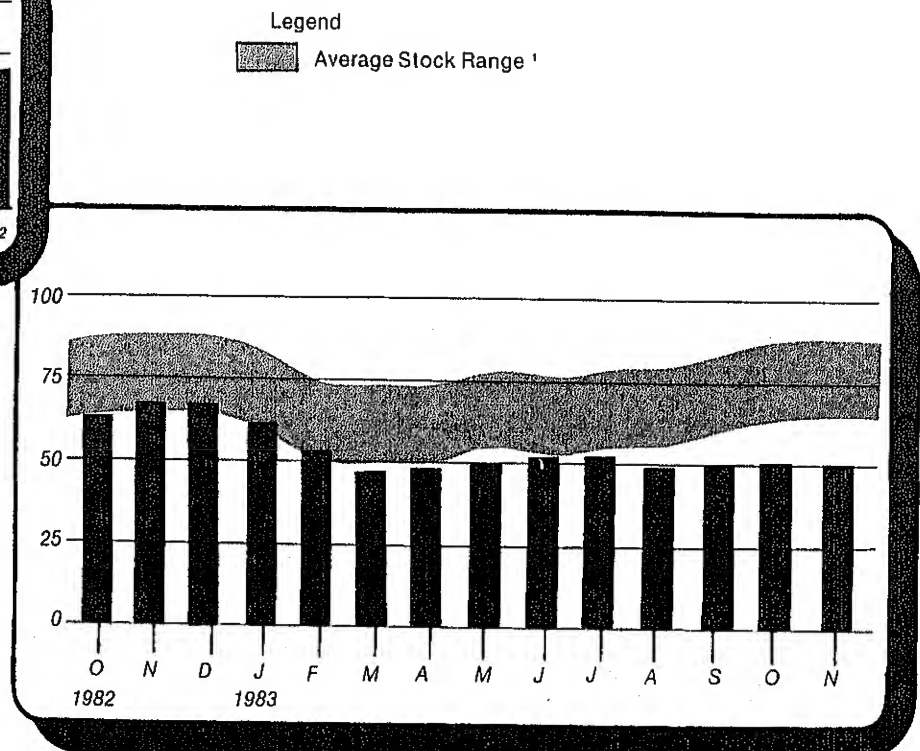
Monthly

## Residual Fuel Oil Ending Stocks

(Millions of Barrels)



<sup>1</sup> Level and width of Average Stock Range for residual fuel oil based on 3 years of data, July 80-June 83. See Explanatory Note 6.



Monthly

# Residual Fuel Oil Supply and Disposition

		Supply				Disposition		Ending Stocks <sup>1</sup>
		Total Production	Imports	Stock Withdrawal <sup>2</sup>	Crude Used Directly <sup>3</sup>	Exports	Products Supplied <sup>3</sup>	
		Thousand Barrels per Day						Million Barrels
1973	AVERAGE	971	1,853	5	17	23	2,822	53
1974	AVERAGE	1,070	1,587	-17	13	14	2,639	<sup>4</sup> 60
1975	AVERAGE	1,235	1,223	2	15	15	2,462	74
1976	AVERAGE	1,377	1,413	5	17	12	2,801	72
1977	AVERAGE	1,754	1,359	-48	13	6	3,071	90
1978	AVERAGE	1,667	1,355	-1	13	13	3,023	90
1979	AVERAGE	1,687	1,151	-15	12	9	2,826	96
1980	AVERAGE	1,580	939	10	12	33	2,508	<sup>4</sup> 92
1981	January	1,612	1,015	302	32	65	2,896	82
	February	1,565	954	150	44	125	2,588	78
	March	1,424	699	100	48	145	2,126	75
	April	1,320	584	66	49	151	1,868	73
	May	1,223	741	-170	49	25	1,817	78
	June	1,232	540	291	49	76	2,037	69
	July	1,174	830	2	48	82	1,971	69
	August	1,231	819	-179	50	69	1,852	75
	September	1,292	841	-176	51	126	1,882	80
	October	1,238	786	8	54	202	1,884	80
	November	1,227	880	-49	53	203	1,909	81
	December	1,329	916	110	52	157	2,250	78
	AVERAGE	1,321	800	37	48	118	2,088	
1982	January	1,235	831	301	53	235	2,185	69
	February	1,186	956	363	53	213	2,344	58
	March	1,123	912	12	53	197	1,903	58
	April	1,166	788	150	52	234	1,923	54
	May	1,128	742	-172	52	191	1,560	59
	June	1,074	652	-57	50	217	1,501	61
	July	1,028	657	56	49	239	1,550	59
	August	965	551	203	47	235	1,531	53
	September	1,008	872	-306	44	148	1,470	62
	October	955	783	-57	43	234	1,490	64
	November	989	837	-94	43	182	1,591	66
	December	989	747	6	43	186	1,598	<sup>4</sup> 66
	AVERAGE	1,070	776	32	48	209	1,716	
1983	January	935	691	243	NA	294	1,574	61
	February	857	632	270	NA	191	1,568	53
	March	833	686	220	NA	169	1,569	46
	April	942	743	-10	NA	310	1,364	47
	May	930	709	-139	NA	190	1,310	51
	June	832	676	28	NA	219	1,317	50
	July	771	682	-58	NA	90	1,306	52
	August	706	705	115	NA	165	1,362	48
	September	815	690	-47	NA	134	1,324	50
	October*	R 799	R 634	R -56	NA	153	R 1,224	R 51
	November**	794	764	-115	NA	NA	1,291	51
	AVERAGE	837	692	40	NA	NA	1,382	

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> Beginning in January 1983, product supplied for residual fuel oil does not include crude oil used directly. See Explanatory Note 4.

<sup>4</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-75, 1980-91, and 1982-68. Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

Totals may not equal sum of components due to independent rounding.

NA = Not available. R = Revised data.

\* See Explanatory Note 9.4.

\*\* Italics denote preliminary data. See Explanatory Note 8.

Note: Beginning in January 1981, survey forms were modified.

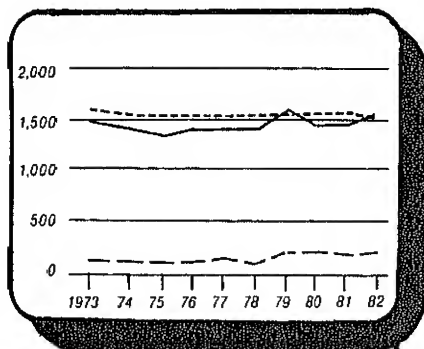
Geographic Coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

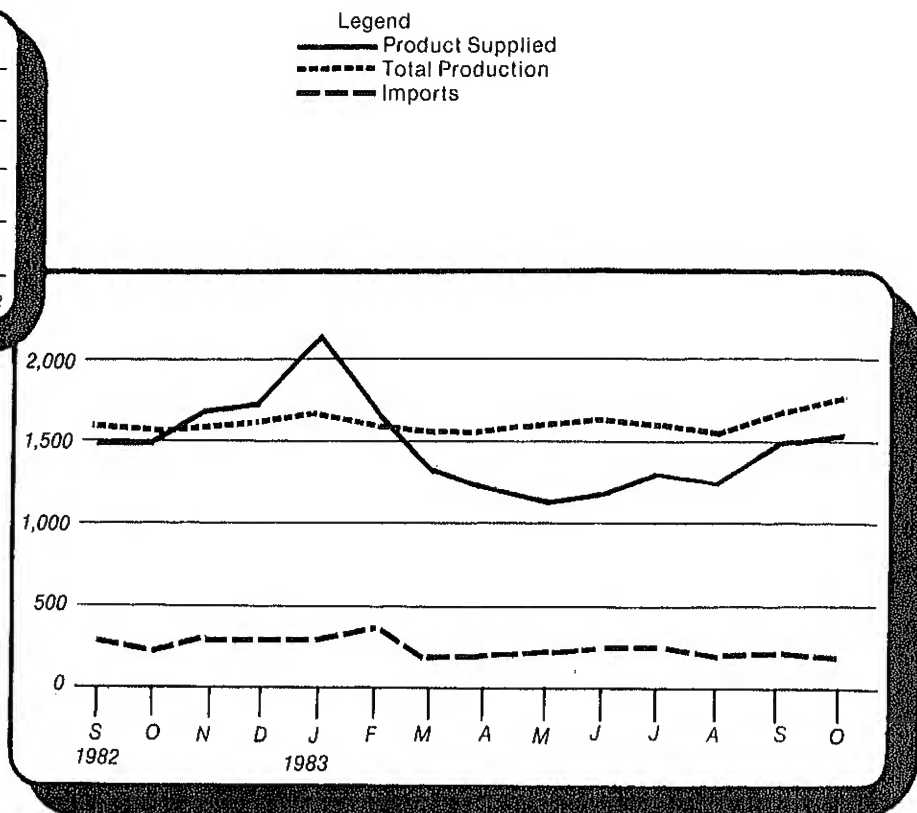


## Liquefied Petroleum Gases Supply and Disposition

(Thousand Barrels Per Day)



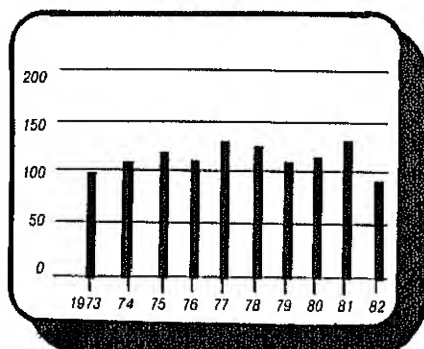
Annual



Monthly

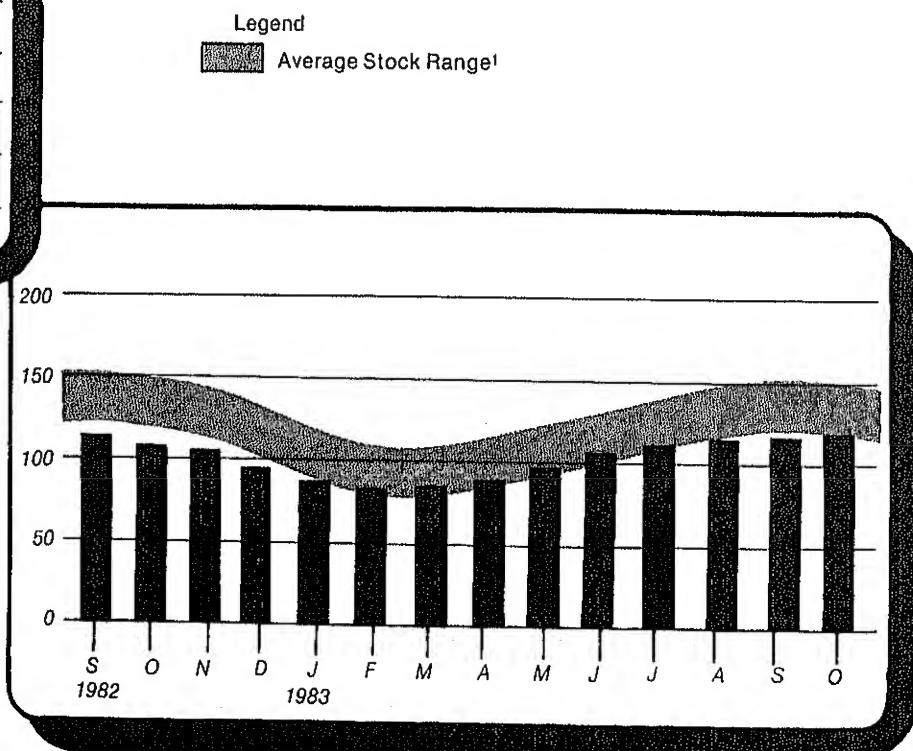
## Liquefied Petroleum Gases Ending Stocks

(Millions of Barrels)



Annual

<sup>1</sup> Level and width of Average Stock range for liquefied petroleum gases based on 3 years of data, July 80-June 83. See Explanatory Note 6.



Monthly

# Liquefied Petroleum Gases Supply and Disposition

	Supply			Disposition			Ending Stocks <sup>1</sup>
	Total Production	Imports	Stock Withdrawal <sup>2</sup>	Refinery Inputs	Exports	Products Supplied	
	Thousand Barrels per Day						Million Barrels
<b>1973 AVERAGE</b>	1,600	132	-35	220	27	1,449	99
<b>1974 AVERAGE</b>	1,565	123	-38	220	25	1,406	<sup>3</sup> 113
<b>1975 AVERAGE</b>	1,527	112	-35	246	26	1,333	125
<b>1976 AVERAGE</b>	1,535	130	24	260	25	1,404	116
<b>1977 AVERAGE</b>	1,566	161	-55	233	18	1,422	136
<b>1978 AVERAGE</b>	1,537	123	12	239	20	1,413	132
<b>1979 AVERAGE</b>	1,556	217	70	236	15	1,592	111
<b>1980 AVERAGE</b>	1,535	216	-27	233	21	1,469	<sup>3</sup> 120
<b>1981</b>							
January	1,617	306	363	352	21	1,913	117
February	1,593	327	173	303	21	1,769	112
March	1,551	260	-4	257	20	1,530	112
April	1,586	214	-236	231	26	1,308	119
May	1,587	189	-258	220	19	1,279	127
June	1,567	206	-208	237	24	1,304	133
July	1,507	213	-258	215	17	1,229	141
August	1,592	195	-242	235	149	1,160	149
September	1,622	199	-75	287	21	1,438	151
October	1,593	287	72	320	76	1,556	149
November	1,571	280	86	383	58	1,495	146
December	1,468	255	379	428	50	1,624	135
<b>AVERAGE</b>	<b>1,571</b>	<b>244</b>	<b>-18</b>	<b>289</b>	<b>42</b>	<b>1,466</b>	
<b>1982</b>							
January	1,565	314	443	391	67	1,863	121
February	1,466	291	243	327	51	1,621	114
March	1,544	223	211	289	74	1,615	108
April	1,506	188	98	257	77	1,458	105
May	1,565	186	-71	234	43	1,403	107
June	1,515	192	-86	262	106	1,254	109
July	1,476	227	-13	253	37	1,399	110
August	1,511	125	-45	254	61	1,276	111
September	1,538	247	37	274	85	1,463	110
October	1,517	194	97	306	81	1,421	107
November	1,542	267	175	363	37	1,583	102
December	1,580	258	256	395	56	1,642	<sup>3</sup> 94
<b>AVERAGE</b>	<b>1,528</b>	<b>226</b>	<b>111</b>	<b>300</b>	<b>65</b>	<b>1,499</b>	
<b>1983</b>							
January	1,662	240	618	313	118	2,088	84
February	1,560	305	84	237	76	1,636	81
March	1,517	166	-51	189	127	1,316	83
April	1,531	124	-107	198	116	1,232	86
May	1,545	167	-326	207	84	1,094	96
June	1,593	172	-333	205	59	1,169	106
July	1,571	191	-206	217	55	1,284	112
August	1,505	160	-183	229	29	1,225	118
September	1,625	178	-23	236	86	1,457	119
October*	1,688	160	-61	268	32	1,487	121
<b>AVERAGE</b>	<b>1,580</b>	<b>185</b>	<b>-59</b>	<b>230</b>	<b>78</b>	<b>1,398</b>	

<sup>1</sup> Stocks are totals as of end of period.

<sup>2</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>3</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-113, 1980-128, and 1982-103. Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

Totals may not equal sum of components due to independent rounding.

\* See Explanatory Note 9.5.

Geographic coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Other Petroleum Products<sup>1</sup> Supply and Disposition

		Supply			Disposition			Ending Stocks <sup>2</sup>
		Total Production	Imports	Stock Withdrawal <sup>3</sup>	Refinery Inputs	Exports	Products Supplied	
		Thousand Barrels per Day						Million Barrels
1973	AVERAGE	3,693	502	-9	750	166	3,270	208
1974	AVERAGE	3,558	432	-28	665	174	3,123	<sup>4</sup> 218
1975	AVERAGE	3,424	277	-2	537	160	3,002	219
1976	AVERAGE	3,643	206	-5	524	175	3,145	220
1977	AVERAGE	3,912	205	-27	514	165	3,410	230
1978	AVERAGE	4,046	166	14	492	167	3,568	225
1979	AVERAGE	4,153	195	-37	352	209	3,749	238
1980	AVERAGE	3,956	210	-23	311	198	3,634	<sup>4</sup> 247
1981	January	3,821	162	80	851	132	3,081	296
	February	3,723	182	-200	538	208	2,958	302
	March	3,722	230	-55	642	210	3,043	304
	April	3,711	230	24	733	192	3,040	303
	May	3,892	229	-58	594	238	3,231	305
	June	3,925	218	-29	656	197	3,261	306
	July	3,852	149	284	791	212	3,282	297
	August	3,876	276	-33	676	219	3,225	298
	September	3,718	285	215	883	176	3,159	291
	October	3,503	241	193	710	227	3,000	285
	November	3,579	262	33	784	154	2,935	284
	December	3,543	243	71	805	223	2,829	282
	AVERAGE	3,739	226	46	723	199	3,088	
1982	January	3,171	269	-7	624	180	2,631	282
	February	3,403	305	-153	663	138	2,755	287
	March	3,466	243	-191	725	161	2,631	293
	April	3,408	309	73	796	204	2,790	290
	May	3,317	318	184	824	210	2,785	285
	June	3,547	315	123	812	216	2,954	281
	July	3,660	408	-1	856	187	3,023	281
	August	3,583	346	217	743	202	3,201	274
	September	3,533	375	105	749	213	3,051	271
	October	3,529	383	244	915	266	2,976	264
	November	3,498	423	-28	837	269	2,786	264
	December	3,324	313	366	885	275	2,842	<sup>4</sup> 253
	AVERAGE	3,453	334	80	787	211	2,869	
1983	January	3,222	297	-371	570	271	2,307	271
	February	3,270	287	-1	680	232	2,645	271
	March	3,400	298	-94	570	249	2,786	273
	April	3,363	377	3	596	247	2,901	273
	May	3,448	364	26	694	242	2,902	273
	June	3,674	427	99	715	292	3,197	270
	July	3,703	393	106	757	209	3,237	266
	August	3,774	435	23	689	242	3,302	266
	September	3,861	460	-31	768	236	3,287	267
	October*	3,579	427	-124	701	195	2,985	270
	AVERAGE	3,531	377	-37	674	241	2,956	

<sup>1</sup> Includes natural gasoline and isopentane, unfractionated stream, plant condensate, other liquids; and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil, and liquefied petroleum gases.

<sup>2</sup> Stocks are totals as of end of period.

<sup>3</sup> A negative number indicates an increase in stocks and a positive number indicates a decrease.

<sup>4</sup> In January 1975, 1981, and 1983, significant numbers of new respondents were added to bulk terminal and pipeline surveys as a result of extensive investigation during the previous years. The major impact is on the reporting of stocks and stock withdrawals. Using the expanded coverage (new basis), end of year stocks would be: 1974-220, 1980-249, and 1982-259. Stock withdrawals during 1975, 1981, and 1983 are calculated using new basis stock levels.

Totals may not equal sum of components due to independent rounding.

\* See Explanatory Note 9.6.

Geographic Coverage: The 50 United States and the District of Columbia.

Sources: See "Sources" at the end of this section.

# Sources

1. 1973 through 1976: Bureau of Mines, U.S. Department of the Interior, *Petroleum Statement, Annual and PAD Districts Supply/Demand, Annual*, Mineral Industry Surveys.
2. 1977 through 1980: Energy Information Administration, U.S. Department of Energy, *Monthly Petroleum Statistics Report*, (unleaded gasoline category).
3. 1977 through 1980: Energy Information Administration, U.S. Department of Energy, *Petroleum Statement, Annual and PAD Districts Supply/Demand, Annual*, Energy Data Reports.
4. January 1981 through December 1982: Energy Information Administration, U.S. Department of Energy, *Petroleum Supply Annual*.
5. January 1983 through October 1983: Detailed statistics in appropriate issues of the *Petroleum Supply Monthly*. (See Explanatory Notes 9.1 through 9.6).
6. November 1983: Estimates based on EIA weekly data (except domestic crude oil production) (see Explanatory Note 1.1).
7. January 1983 through November 1983: Domestic crude oil production estimate based on historical statistics from State Conservation Agencies the U.S. Geological Survey. (See Explanatory Note 3).



## Detailed Statistics

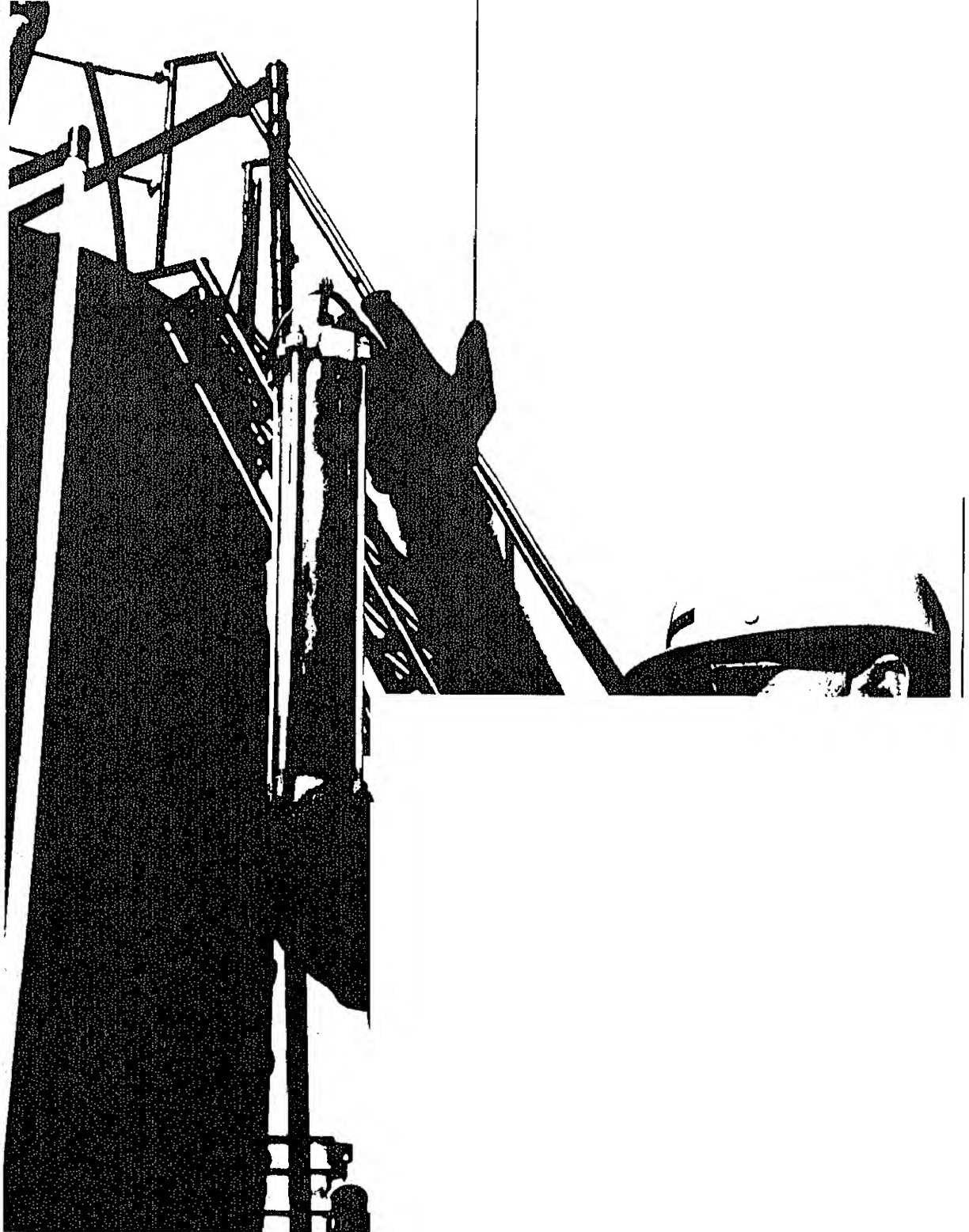




Table 1. U.S. Petroleum Balance, October 1983

	Current Month		Year-to-date	
	Thousand Barrels	Thousand Barrels per Day	Thousand Barrels	Thousand Barrels per Day
Crude Oil (Including Lease Condensate)				
Field Production				
(1) Alaska .....	E 53,658	1,731	E 521,336	1,715
(2) Lower 48 States .....	E 214,808	6,923	E 2,112,351	6,949
(3) Total U.S. ....	E 268,266	8,654	E 2,633,687	8,663
Net Imports				
(4) Imports (Gross Excluding SPR) .....	100,558	3,244	932,231	3,067
(5) SPR Imports .....	6,262	202	74,195	244
(6) Exports .....	4,336	140	51,443	169
(7) Imports (Net Including SPR) .....	102,484	3,308	954,983	3,141
Other Sources				
(8) SPR Withdrawal (+) or Addition (-) .....	-6,240	-201	-73,413	-241
(9) Other Stock Withdrawal (+) or Addition (-) .....	650	21	-939	-3
(10) Product Supplied and Losses .....	-1,997	-64	-20,085	-66
(11) Unaccounted for 1 .....	2,151	69	58,106	191
(12) Total Other Sources .....	-5,436	-175	-36,331	-120
(13) Crude Input to Refineries .....	365,314	11,784	3,552,339	11,685
(13) = (3) + (7) + (12)				
Natural Gas Plant Liquids (NGPL)				
(14) Field Production .....	49,720	1,604	474,090	1,560
(15) Imports 2 .....	524	17	4,214	14
(16) Stock Withdrawal (+) or Addition (-) 2 .....	-1,739	-58	-7,044	-23
(17) Total NGPL Supply .....	48,505	1,565	471,260	1,550
Other Liquids				
Unfinished Oils and Gasoline Blending Components, Total				
(18) Stock Withdrawal (+) or Addition (-) .....	28	1	-5,501	-18
(19) Imports .....	8,249	268	78,761	259
(20) Other Hydrocarbons and Alcohol New Supply (Field Production) ...	1,836	59	16,361	54
(21) Refinery Processing Gain 1 .....	16,053	518	145,310	478
(22) Crude Oil Product Supplied .....	1,967	63	19,639	65
(23) Total Other Liquids .....	28,133	908	254,570	837
(23) = (18) through (22)				
(24) Total Production of Products 3 .....	441,953	14,257	4,278,169	14,073
(24) = (13) + (17) + (23)				
Net Imports of Refined Products 3				
(25) Imports (Gross) .....	47,350	1,527	421,752	1,387
(26) Exports .....	13,518	436	178,228	586
(27) Imports (Net) .....	33,833	1,091	243,524	801
(28) Total New Supply of Products .....	475,785	15,348	4,521,693	14,874
(28) = (24) + (27)				
(29) Refined Products Stock Withdrawal (+) or Addition (-) 3 .....	-12,428	-401	37,036	122
(30) Total Petroleum Products Supplied for Domestic Use .....	463,357	14,947	4,558,729	14,996
(30) = (28) + (29)				
(31) Finished Motor Gasoline .....	203,998	6,581	2,004,289	6,593
(32) Distillate Fuel Oil .....	80,792	2,606	788,500	2,594
(33) Residual Fuel Oil .....	37,954	1,224	422,771	1,391
(34) Liquefied Petroleum Gases .....	46,099	1,487	424,883	1,398
(35) Other 4 .....	92,547	2,985	898,646	2,956
(36) Crude Oil .....	1,967	63	19,639	65
(37) Total Product Supplied .....	463,357	14,947	4,558,729	14,996
(37) = (31) through (36)				
Ending Stocks, All Oils				
(38) Crude Oil and Lease Condensate (Excluding SPR) .....	350,983	--	350,983	--
(39) Strategic Petroleum Reserve (SPR) .....	367,240	--	367,240	--
(40) Unfinished Oils .....	112,120	--	112,120	--
(41) Gasoline Blending Components .....	41,203	--	41,203	--
(42) Natural Gasoline and Unfractionated Stream 2 .....	18,512	--	18,512	--
(43) Finished Refined Products 3 .....	621,820	--	621,820	--
(44) Total Stocks .....	1,511,878	--	1,511,878	--

1 A balancing item.

2 Includes isopentane, natural gasoline, unfractionated stream, and plant condensate only.

3 For products included see Explanatory Note 9.7.

4 Includes natural gasoline and isopentane, unfractionated stream, plant condensate, other liquids; and all finished petroleum products except finished motor gasoline, distillate fuel oil, residual fuel oil and liquefied petroleum gases.

E = Estimated.

-- Not Applicable.

Note: Totals may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes 1, 2 and 9.7.



Table 2. Supply and Disposition of Crude Oil and Petroleum Products, October 1983  
(Thousand Barrels)

Commodity	Supply				Disposition					
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied	Ending Stocks
Crude Oil (including lease condensate)	E 268,266	0	106,820	-5,590	2,151	30	365,314	4,336	1,967	718,223
Natural Gas Liquids and LRGs	49,386	10,662	5,493	-3,632	0	0	14,475	987	46,448	139,256
Natural Gasoline and Isopentane	4,814	0	279	623	0	0	5,369	0	347	6,385
Unfractionated Stream	2,360	0	0	-2,360	0	0	0	0	0	11,675
Plant Condensate	557	0	246	-2	0	0	799	0	2	452
Liquefied Petroleum Gases	41,655	10,662	4,969	-1,893	0	0	8,307	987	46,099	120,744
Ethane	8,712	625	564	-1,251	0	0	69	(s)	8,581	7,135
Propane	14,481	8,216	1,218	720	0	0	149	534	23,952	61,564
Butane	6,625	1,643	1,986	-468	0	0	5,403	453	3,930	26,509
Butane-Propane Mixtures	156	127	631	-26	0	0	302	0	586	1,839
Ethane-Propane Mixtures	8,575	0	571	-98	0	0	0	0	9,048	12,846
Isobutane	3,106	51	0	-770	0	0	2,384	0	3	10,851
Other Liquids	1,836	0	8,249	28	0	0	15,572	0	-5,459	153,323
Other Hydrocarbons and Alcohol	1,836	0	0	14	0	0	1,850	0	0	363
Unfinished Oils	0	0	7,629	525	0	0	9,506	0	-1,352	112,120
Motor Gasoline Blending Components	0	0	620	-513	0	0	4,214	0	-4,107	40,487
Aviation Gasoline Blending Components	0	0	0	2	0	0	2	0	0	323
Finished Petroleum Products	334	400,752	42,382	-10,535	0	0	0	12,531	420,401	501,076
Finished Motor Gasoline	47	191,771	10,379	1,852	0	0	0	51	203,998	187,827
Finished Leaded Motor Gasoline	29	84,704	3,825	838	0	0	0	51	89,345	93,772
Finished Unleaded Motor Gasoline	18	107,067	6,554	1,014	0	0	0	0	114,653	94,055
Finished Aviation Gasoline	159	679	(s)	102	0	0	0	0	940	2,441
Naphtha-Type Jet Fuel	0	4,996	0	681	0	0	0	(s)	5,677	6,124
Kerosene-Type Jet Fuel	0	26,247	1,534	-2,283	0	0	0	24	25,474	37,268
Kerosene	4	4,250	358	-1,013	0	0	0	218	3,381	10,207
Distillate Fuel Oil	0	83,131	7,899	-8,537	0	0	0	1,701	80,792	163,285
Residual Fuel Oil	0	24,769	19,645	-1,729	0	0	0	4,732	37,954	51,420
Naphtha < 400 Deg. for Petro. Feed. Use	0	4,396	153	154	0	0	0	285	4,418	1,912
Other Oils > 400 Deg. for Petro. Feed. Use	0	8,175	2	231	0	0	0	207	8,201	1,926
Special Naphthas	81	1,966	916	-319	0	0	0	47	2,597	3,484
Lubricants	0	4,934	394	318	0	0	0	483	5,163	10,636
Waxes	0	485	11	1	0	0	0	34	463	745
Petroleum Coke	0	13,048	0	-720	0	0	0	4,713	7,615	5,550
Asphalt and Road Oil	0	13,335	262	768	0	0	0	8	14,357	16,350
Still Gas	0	17,000	0	0	0	0	0	0	17,000	0
Miscellaneous Products	43	1,570	828	-41	0	0	0	27	2,373	1,901
Total	319,822	411,414	162,944	-19,729	2,151	30	395,361	17,853	463,357	1,511,878

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 3. Year-to-Date Supply and Disposition of Crude Oil and Petroleum Products, January - October 1983  
(Thousand Barrels)

Commodity	Supply					Disposition				
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied	Ending Stocks
Crude Oil (including lease condensate)	E 2,633,687	0	1,006,426	-74,352	58,106	446	3,552,339	51,443	19,639	718,223
Natural Gas Liquids and LRGs	470,392	98,964	60,570	-25,070	0	0	134,617	23,751	446,488	139,256
Natural Gasoline and Isopentane	75,042	0	2,119	-398	0	0	55,177	0	21,586	6,385
Unfractionated Stream	7,805	0	0	-7,636	0	0	169	0	0	11,675
Plant Condensate	6,246	0	2,095	990	0	0	9,311	0	20	452
Liquefied Petroleum Gases	381,299	98,964	56,356	-18,026	0	0	69,960	23,751	424,883	120,744
Ethane	77,826	4,741	13,442	-1,164	0	0	789	30	93,825	7,135
Propane	133,719	81,188	12,912	-3,327	0	0	1,264	14,184	209,043	61,564
Butane	61,956	11,686	13,844	-9,827	0	0	40,165	9,536	27,958	26,509
Butane-Propane Mixtures	1,640	1,127	5,417	286	0	0	2,393	0	6,077	1,839
Ethane-Propane Mixtures	78,134	0	10,742	-1,564	0	0	48	0	87,264	12,846
Isobutane	28,224	222	0	-2,430	0	0	25,301	0	715	10,851
Other Liquids	16,361	0	78,761	-5,501	0	0	140,178	0	-50,557	153,323
Other Hydrocarbons and Alcohol	16,361	0	0	-72	0	0	16,289	0	0	383
Unfinished Oils	0	0	69,276	-6,843	0	0	87,512	0	-25,079	112,120
Motor Gasoline Blending Components	0	0	9,485	1,245	0	0	35,725	0	-24,995	40,497
Aviation Gasoline Blending Components	0	0	1	169	0	0	652	0	-482	323
Finished Petroleum Products	3,698	3,873,480	365,396	55,062	0	0	0	154,478	4,143,158	501,076
Finished Motor Gasoline	667	1,915,711	76,104	14,710	0	0	0	2,902	2,004,289	187,827
Finished Leaded Motor Gasoline	452	861,813	40,220	8,383	0	0	0	2,902	907,965	93,772
Finished Unleaded Motor Gasoline	215	1,053,898	35,884	6,327	0	0	0	0	1,096,324	94,055
Finished Aviation Gasoline	1,021	6,888	212	-127	0	0	0	0	7,994	2,441
Naptha-Type Jet Fuel	0	62,268	0	1,065	0	0	0	201	63,132	6,124
Kerosene-Type Jet Fuel	1	248,609	8,555	-5,267	0	0	0	1,123	250,775	37,268
Kerosene	34	32,138	2,306	585	0	0	0	292	34,771	10,207
Distillate Fuel Oil	11	736,907	49,400	22,294	0	0	0	20,112	788,500	163,285
Residual Fuel Oil	0	255,823	208,267	16,809	0	0	0	58,128	422,771	51,420
Naptha < 400 Deg. for Petro. Feed Use	0	42,994	3,710	55	0	0	0	1,491	45,268	1,912
Other Oils > 400 Deg. for Petro. Feed Use	0	79,015	181	254	0	0	0	4,446	75,004	1,926
Special Naphthas	979	16,810	6,356	-10	0	0	0	949	23,186	3,484
Lubricants	0	43,892	2,447	2,545	0	0	0	4,887	43,996	10,636
Waxes	0	4,531	243	41	0	0	0	231	4,584	745
Petroleum Coke	0	125,973	0	1,171	0	0	0	59,173	67,971	5,550
Asphalt and Road Oil	0	118,333	2,394	919	0	0	0	242	121,404	16,350
Still Gas	0	166,592	0	0	0	0	0	0	166,592	0
Miscellaneous Products	985	16,996	5,221	18	0	0	0	301	22,918	1,901
Total	3,124,138	3,972,444	1,511,153	-49,861	58,106	446	3,827,134	229,672	4,558,729	1,511,878

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 4. Daily Average Supply and Disposition of Crude Oil and Petroleum Products, October 1983  
(Thousand Barrels per Day)

Commodity	Supply				Disposition				
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied
Crude Oil (including lease condensate)	E 8,654	0	3,446	-180	69	1	11,784	140	63
Natural Gas Liquids and LRGs	1,593	344	177	-117	0	0	467	32	1,498
Natural Gasoline and Isopentane	155	0	9	20	0	0	173	0	11
Unfractionated Stream	76	0	0	-76	0	0	0	0	0
Plant Condensate	18	0	8	(s)	0	0	26	0	(s)
Liquefied Petroleum Gases	1,344	344	160	-61	0	0	268	32	1,487
Ethane	281	20	18	-40	0	0	2	(s)	277
Propane	467	265	39	23	0	0	5	17	773
Butane	214	53	64	-15	0	0	174	15	127
Butane-Propane Mixtures	5	4	0	-1	0	0	10	0	19
Ethane-Propane Mixtures	277	0	18	-3	0	0	0	0	292
Isobutane	100	2	0	-25	0	0	77	0	(s)
Other Liquids	59	0	266	1	0	0	502	0	-176
Other Hydrocarbons and Alcohol	59	0	0	(s)	0	0	60	0	0
Unfinished Oils	0	0	246	17	0	0	307	0	-44
Motor Gasoline Blending Components	0	0	20	-17	0	0	136	0	-132
Aviation Gasoline Blending Components	0	0	0	(s)	0	0	(s)	0	0
Finished Petroleum Products	11	12,927	1,367	-340	0	0	0	404	13,561
Finished Motor Gasoline	2	6,186	335	60	0	0	0	2	6,581
Finished Leaded Motor Gasoline	1	2,732	123	27	0	0	0	2	2,882
Finished Unleaded Motor Gasoline	1	3,454	211	33	0	0	0	0	3,698
Finished Aviation Gasoline	5	22	(s)	3	0	0	0	0	30
Naphtha-Type Jet Fuel	0	161	0	22	0	0	0	(s)	183
Kerosene-Type Jet Fuel	0	847	49	-74	0	0	0	1	822
Kerosene	(s)	137	12	-33	0	0	0	7	109
Distillate Fuel Oil	0	2,682	255	-275	0	0	0	55	2,606
Residual Fuel Oil	0	799	634	-56	0	0	0	153	1,224
Naphtha < 400 Deg. for Petro. Feed. Use	0	142	5	5	0	0	0	9	143
Other Oils > 400 Deg. for Petro. Feed. Use	0	264	(s)	7	0	0	0	7	265
Special Naphthas	3	63	30	-10	0	0	0	2	84
Lubricants	0	159	13	10	0	0	0	16	167
Waxes	0	16	(s)	(s)	0	0	0	1	15
Petroleum Coke	0	421	0	-23	0	0	0	152	246
Asphalt and Road Oil	0	430	8	25	0	0	0	(s)	463
Still Gas	0	548	0	0	0	0	0	0	548
Miscellaneous Products	1	51	27	-1	0	0	0	1	77
Total	10,317	13,271	5,256	-636	69	1	12,754	576	14,947

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 5. Year-to-Date Daily Average Supply and Disposition of Crude Oil and Petroleum Products, January - October 1983  
(Thousand Barrels per Day)

Commodity	Supply				Disposition				
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Crude Losses	Refinery Inputs	Exports	Products Supplied
Crude Oil (including lease condensate)	E 8,663	0	3,311	-245	191	1	11,685	169	65
Natural Gas Liquids and LRGs	1,547	326	199	-82	0	0	443	78	1,469
Natural Gasoline and Isopentane	247	0	7	-1	0	0	182	0	71
Unfractionated Stream	26	0	0	-25	0	0	1	0	0
Plant Condensate	21	0	7	3	0	0	31	0	(s)
Liquefied Petroleum Gases	1,254	326	185	-59	0	0	230	78	1,398
Ethane	255	16	44	-4	0	0	3	(s)	309
Propane	440	267	42	-11	0	0	4	47	688
Butane	204	38	46	-32	0	0	132	31	92
Butane-Propane Mixtures	5	4	18	1	0	0	8	0	20
Ethane-Propane Mixtures	257	0	35	-5	0	0	(s)	0	287
Isobutane	93	1	0	-8	0	0	83	0	2
Other Liquids	54	0	259	-18	0	0	461	0	-166
Other Hydrocarbons and Alcohol	54	0	0	(s)	0	0	54	0	0
Unfinished Oils	0	0	228	-23	0	0	288	0	-82
Motor Gasoline Blending Components	0	0	31	4	0	0	118	0	-82
Aviation Gasoline Blending Components	0	0	(s)	1	0	0	2	0	-2
Finished Petroleum Products	12	12,742	1,202	181	0	0	0	508	13,629
Finished Motor Gasoline	2	6,302	250	48	0	0	0	10	6,593
Finished Leaded Motor Gasoline	1	2,835	132	28	0	0	0	10	2,987
Finished Unleaded Motor Gasoline	1	3,467	118	21	0	0	0	0	3,606
Finished Aviation Gasoline	3	23	1	(s)	0	0	0	0	26
Naphtha-Type Jet Fuel	0	205	0	4	0	0	0	1	208
Kerosene-Type Jet Fuel	(s)	818	28	-17	0	0	0	4	825
Kerosene	(s)	106	8	2	0	0	0	1	114
Distillate Fuel Oil	(s)	2,424	163	73	0	0	0	66	2,594
Residual Fuel Oil	0	842	685	55	0	0	0	191	1,391
Naphtha < 400 Deg. for Petro. Feed. Use	0	141	12	(s)	0	0	0	5	149
Other Oils > 400 Deg. for Petro. Feed. Use	0	260	1	1	0	0	0	15	247
Special Naphthas	3	55	21	(s)	0	0	0	3	76
Lubricants	0	144	8	8	0	0	0	16	145
Waxes	0	15	1	(s)	0	0	0	1	15
Petroleum Coke	0	414	0	4	0	0	0	195	224
Asphalt and Road Oil	0	389	8	3	0	0	0	1	399
Still Gas	0	548	0	0	0	0	0	0	548
Miscellaneous Products	3	56	17	(s)	0	0	0	1	75
Total	10,277	13,067	4,971	-164	191	1	12,589	755	14,996

<sup>1</sup> Unaccounted for crude oil is a balancing item.

(s) Less than 500 barrels.

E = Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 6. PAD District I, Supply and Disposition of Crude Oil and Petroleum Products, October 1983  
(Thousand Barrels)

Commodity	Supply					Disposition				Ending Stocks
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs	Exports	Products Supplied
Crude Oil (including lease condensate) .....	E 2,350	0	23,780	588	-378	4,285	1	30,624	0	0
Natural Gas Liquids and LRGs .....	836	940	451	-207	0	2,511	0	133	34	4,364
Liquefied Petroleum Gases .....	702	940	327	-267	0	2,511	0	32	34	4,147
Other Products <sup>2</sup> .....	134	0	124	60	0	0	0	101	0	217
Other Liquids .....	68	0	4,021	737	0	232	0	4,488	0	570
Other Hydrocarbons and Alcohol .....	68	0	0	38	0	0	0	106	0	0
Unfinished Oils .....	0	0	3,732	-49	0	232	0	3,003	0	912
Motor Gasoline Blending Components .....	0	0	289	753	0	0	0	1,384	0	-342
Aviation Gasoline Blending Components .....	0	0	0	-5	0	0	0	-5	0	0
Finished Petroleum Products .....	43	35,727	36,241	-10,086	0	78,381	0	0	365	139,941
Finished Motor Gasoline .....	43	16,464	9,178	1,591	0	42,406	0	0	32	69,650
Finished Leaded Motor Gasoline .....	25	6,080	2,928	1,569	0	15,455	0	0	32	26,025
Finished Unleaded Motor Gasoline .....	18	10,384	6,250	22	0	26,951	0	0	0	43,625
Finished Aviation Gasoline .....	0	22	(s)	1	0	161	0	0	0	184
Naphtha-Type Jet Fuel .....	0	310	0	41	0	313	0	0	(s)	664
Kerosene-Type Jet Fuel .....	0	769	1,453	-1,082	0	9,563	0	0	0	10,703
Kerosene .....	0	33	330	-783	0	807	0	0	2	385
Distillate Fuel Oil .....	0	8,609	7,515	-7,108	0	16,040	0	0	100	24,956
Residual Fuel Oil .....	0	2,423	17,100	-1,767	0	7,722	0	0	(s)	25,478
Naphtha and Other Oils for Petro. Feed .....	0	319	12	-2	0	25	0	0	49	305
Special Naphthas .....	0	26	9	-154	0	229	0	0	5	105
Lubricants .....	0	674	376	96	0	612	0	0	127	1,631
Waxes .....	0	97	6	-4	0	10	0	0	5	105
Petroleum Coke .....	0	1,190	0	-175	0	0	0	0	30	985
Asphalt and Road Oil .....	0	2,988	259	-800	0	319	0	0	2	2,763
Still Gas .....	0	1,673	0	0	0	0	0	0	0	1,873
Miscellaneous Products .....	0	130	3	60	0	174	0	0	14	353
<b>Total</b> .....	<b>3,297</b>	<b>36,667</b>	<b>64,493</b>	<b>-8,968</b>	<b>-378</b>	<b>85,409</b>	<b>1</b>	<b>35,245</b>	<b>400</b>	<b>144,875</b>
										<b>224,750</b>

<sup>1</sup> Unaccounted for crude oil is a balancing item.<sup>2</sup> Includes natural gasoline, isopentane, unrefractionated stream, and plant condensate.

(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 7. PAD District II, Supply and Disposition of Crude Oil and Petroleum Products, October 1983  
(Thousand Barrels)

(Thousands Barrels)											
Commodity	Supply				Disposition				Ending Stocks		
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil	Net Receipts	Crude Losses	Refinery Inputs		Exports	Products Supplied
Crude Oil (including lease condensate)											
E 32,389	0		14,247	2,665	33,602	1,793	6	84,349	341	0	74,291
Natural Gas Liquids and LRGs											
9,348	2,298		2,928	405	0	3,965	0	4,909	302	13,733	43,034
9,245	2,298		2,928	1,162	0	2,441	0	3,286	302	14,486	37,340
103	0		0	-757	0	1,524	0	1,623	0	-753	5,694
Other Liquids											
405	0		193	-2,324	0	824	0	-323	0	-579	26,068
Other Hydrocarbons and Alcohol	405	0	0	-34	0	0	0	371	0	0	136
Unfinished Oils	0	0	193	-2,232	0	-267	0	-2,112	0	-194	18,285
Motor Gasoline Blending Components	0	0	0	-68	0	1,091	0	1,408	0	-385	7,537
Aviation Gasoline Blending Components	0	0	0	10	0	0	0	10	0	0	110
Finished Petroleum Products											
6	90,174		1,266	-1,544	0	22,859	0	0	141	112,620	124,638
Finished Motor Gasoline	0	50,016	71	518	0	13,323	0	0	7	63,921	57,724
Finished Leaded Motor Gasoline	0	24,343	56	-23	0	6,868	0	0	7	31,237	28,913
Finished Unleaded Motor Gasoline	0	25,673	15	541	0	6,455	0	0	0	32,684	28,811
Finished Aviation Gasoline	0	71	0	94	0	228	0	0	0	393	559
Naphtha-Type Jet Fuel	0	949	0	-389	0	200	0	0	0	760	1,753
Kerosene-Type Jet Fuel	0	4,239	0	-493	0	1,316	0	0	0	5,062	8,004
Kerosene	0	739	0	-291	0	38	0	0	1	485	2,390
Distillate Fuel Oil	0	19,474	136	-1,650	0	6,797	0	0	(s)	24,757	40,771
Residual Fuel Oil	0	2,006	298	-357	0	-65	0	0	0	1,882	3,819
Naphtha and Other Oils for Petro. Feed.	0	754	14	14	0	26	0	0	45	764	213
Special Naphthas	0	551	159	-112	0	163	0	0	1	760	662
Lubricants	0	884	11	-58	0	410	0	0	21	1,226	1,981
Waxes	0	54	2	-4	0	0	0	0	(s)	52	77
Petroleum Coke	0	3,186	0	56	0	0	0	0	63	3,179	667
Asphalt and Road Oil	0	3,571	3	1,113	0	601	0	0	1	5,287	5,804
Still Gas	0	3,532	0	0	0	0	0	0	0	3,532	0
Miscellaneous Products	6	148	571	15	0	-178	0	0	2	561	214
Total	42,148	92,472	18,633	-798	33,602	29,441	6	88,935	783	125,774	268,031

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 8. PAD District III, Supply and Disposition of Crude Oil and Petroleum Products, October 1983  
(Thousand Barrels)

Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs	Exports	Products Supplied	
Crude Oil (including lease condensate)	E 128,517	0	62,163	-9,637	-21,427	12,361	0	171,948	0	29	532,180
Natural Gas Liquids and LRGs	35,600	6,272	1,245	-3,755	0	-5,182	0	8,137	550	25,493	85,297
Liquefied Petroleum Gases	30,150	6,272	966	-2,733	0	-4,830	0	4,117	550	25,159	73,150
Other Products <sup>2</sup>	5,450	0	278	-1,022	0	-352	0	4,020	0	334	12,147
Other Liquids	862	0	3,749	2,558	0	-1,344	0	12,490	0	-6,665	70,325
Other Hydrocarbons and Alcohol	862	0	0	6	0	0	0	868	0	0	117
Unfinished Oils	0	0	3,581	3,612	0	-253	0	9,773	0	-2,833	51,106
Motor Gasoline Blending Components	0	0	168	-1,043	0	-1,091	0	1,866	0	-3,832	18,927
Aviation Gasoline Blending Components	0	0	0	-17	0	0	0	-17	0	0	175
Finished Petroleum Products	278	193,263	3,131	-1,624	0	-103,880	0	0	5,746	85,422	131,103
Finished Motor Gasoline	0	89,232	533	-1,959	0	-57,462	0	0	0	30,344	49,044
Finished Leaded Motor Gasoline	0	36,890	533	-927	0	-23,233	0	0	0	13,263	24,415
Finished Unleaded Motor Gasoline	0	52,342	0	-1,032	0	-34,229	0	0	0	17,081	24,629
Finished Aviation Gasoline	159	393	0	-1	0	-406	0	0	0	145	837
Naphtha-Type Jet Fuel	0	2,049	0	792	0	-514	0	0	0	2,327	1,772
Kerosene-Type Jet Fuel	0	13,629	3	-686	0	-11,372	0	0	0	1,574	12,304
Kerosene	4	3,156	28	154	0	-845	0	0	216	2,281	3,121
Distillate Fuel Oil	0	40,243	8	51	0	-23,092	0	0	0	17,000	34,608
Residual Fuel Oil	0	10,953	1,444	254	0	-7,657	0	0	211	3,145	13,569
Naphtha and Other Oils for Petro. Feed	0	10,974	129	162	0	-51	0	0	1,849	3,058	13,569
Special Naphthas	81	1,315	734	-94	0	-392	0	0	381	10,832	3,058
Lubricants	0	2,978	7	284	0	-1,163	0	0	39	1,606	1,684
Waxes	0	256	(s)	8	0	-10	0	0	287	1,819	4,463
Petroleum Coke	0	5,444	0	-558	0	0	0	0	24	230	456
Asphalt and Road Oil	0	3,787	0	91	0	-920	0	0	2,732	2,154	1,509
Still Gas	0	7,820	0	0	0	0	0	0	(s)	2,958	3,574
Miscellaneous Products	34	1,034	245	-122	0	4	0	0	0	7,820	0
Total	165,257	199,535	70,287	-12,458	-21,427	-98,045	0	192,575	6,295	104,279	818,905

<sup>1</sup> Unaccounted for crude oil is a balancing item.<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 9. PAD District IV, Supply and Disposition of Crude Oil and Petroleum Products, October 1983  
(Thousand Barrels)

(Thousand Barrels)											
Commodity	Supply					Disposition					Ending Stocks
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>	Net Receipts	Crude Losses	Refinery Inputs	Exports	Products Supplied	
Crude Oil (including lease condensate)	E 16,821	0	1,345	-68	-4,380	0	0	13,712	0	6	12,889
Natural Gas Liquids and LRGs	2,548	70	587	-28	0	-1,294	0	515	0	1,368	1,159
Liquefied Petroleum Gases	935	70	465	-15	0	-122	0	363	0	970	569
Other Products <sup>2</sup>	1,613	0	122	-13	0	-1,172	0	152	0	398	590
Other Liquids	0	0	93	-721	0	0	0	-1,185	0	557	4,777
Other Hydrocarbons and Alcohol	0	0	0	0	0	0	0	0	0	0	0
Unfinished Oils	0	0	93	-680	0	0	0	-1,188	0	601	3,155
Motor Gasoline Blending Components	0	0	0	-41	0	0	0	3	0	-44	1,622
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0
Finished Petroleum Products	7	13,143	341	-92	0	800	0	0	2	14,197	9,436
Finished Motor Gasoline	4	6,479	161	-362	0	735	0	0	0	7,017	4,665
Finished Leaded Motor Gasoline	4	4,096	132	-271	0	297	0	0	0	4,258	2,918
Finished Unleaded Motor Gasoline	0	2,383	29	-91	0	438	0	0	0	2,759	1,747
Finished Aviation Gasoline	0	30	0	-23	0	17	0	0	0	24	60
Naphtha-Type Jet Fuel	0	393	0	-34	0	-115	0	0	0	244	351
Kerosene-Type Jet Fuel	0	611	0	-52	0	371	0	0	0	930	766
Kerosene	0	24	0	3	0	0	0	0	0	27	27
Distillate Fuel Oil	0	3,724	141	53	0	-208	0	0	0	3,710	2,632
Residual Fuel Oil	0	298	39	22	0	0	0	0	0	359	452
Naphtha and Other Oils for Petro. Feed	0	1	0	-1	0	0	0	0	1	-1	5
Special Naphthas	0	1	0	1	0	0	0	0	(s)	2	8
Lubricants	0	27	(s)	-1	0	0	0	0	1	26	53
Waxes	0	10	0	0	0	0	0	0	(s)	10	0
Petroleum Coke	0	278	0	15	0	0	0	0	0	293	133
Asphalt and Road Oil	0	715	0	287	0	0	0	0	1	1,001	279
Still Gas	0	507	0	0	0	0	0	0	0	507	0
Miscellaneous Products	3	45	(s)	0	0	0	0	0	0	48	5
Total	19,376	13,213	2,357	-909	-4,380	-494	0	13,042	2	16,129	28,261

<sup>1</sup> Unaccounted for crude oil is a balancing item.

<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(s) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.



Table 10. PAD District V, Supply and Disposition of Crude Oil and Petroleum Products, October 1983  
(Thousand Barrels)

Commodity	Supply					Net Receipts	Disposition				Ending Stocks
	Field Production	Refinery Production	Imports	Stock Withdrawal (+) or Addition (-)	Unaccounted For Crude Oil <sup>1</sup>		Crude Losses	Refinery Inputs	Exports	Products Supplied	
<b>Crude Oil (including lease condensate)</b> .....	<b>E 88,189</b>	<b>0</b>	<b>5,286</b>	<b>862</b>	<b>-5,267</b>	<b>-18,439</b>	<b>23</b>	<b>64,681</b>	<b>3,995</b>	<b>1,932</b>	<b>83,593</b>
<b>Natural Gas Liquids and LRGs</b> .....	<b>1,054</b>	<b>1,082</b>	<b>282</b>	<b>-47</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>781</b>	<b>101</b>	<b>1,489</b>	<b>3,600</b>
Liquefied Petroleum Gases .....	623	1,082	282	-40	0	0	0	509	101	1,337	3,554
Other Products <sup>2</sup> .....	431	0	0	-7	0	0	0	272	0	152	46
<b>Other Liquids</b> .....	<b>501</b>	<b>0</b>	<b>193</b>	<b>-222</b>	<b>0</b>	<b>288</b>	<b>0</b>	<b>102</b>	<b>0</b>	<b>658</b>	<b>31,648</b>
Other Hydrocarbons and Alcohol .....	501	0	0	4	0	0	0	505	0	0	5
Unfinished Oils .....	0	0	29	-126	0	288	0	30	0	161	23,860
Motor Gasoline Blending Components .....	0	0	164	-114	0	0	0	-447	0	497	7,757
Aviation Gasoline Blending Components .....	0	0	0	14	0	0	0	14	0	0	26
<b>Finished Petroleum Products</b> .....	<b>0</b>	<b>68,445</b>	<b>1,403</b>	<b>2,811</b>	<b>0</b>	<b>1,840</b>	<b>0</b>	<b>0</b>	<b>6,277</b>	<b>68,221</b>	<b>53,090</b>
Finished Motor Gasoline .....	0	29,580	437	2,064	0	998	0	0	12	33,067	19,294
Finished Leaded Motor Gasoline .....	0	13,295	177	490	0	613	0	0	12	14,563	9,059
Finished Unleaded Motor Gasoline .....	0	16,285	260	1,574	0	385	0	0	0	18,504	10,235
Finished Aviation Gasoline .....	0	163	0	31	0	0	0	0	0	194	536
Naphtha-Type Jet Fuel .....	0	1,295	0	271	0	116	0	0	0	1,682	1,643
Kerosene-Type Jet Fuel .....	0	6,999	78	30	0	122	0	0	24	7,205	6,135
Kerosene .....	0	298	(5)	-96	0	0	0	0	0	202	481
Distillate Fuel Oil .....	0	11,081	98	117	0	463	0	0	1,390	10,369	10,660
Residual Fuel Oil .....	0	9,089	765	119	0	0	0	0	2,882	7,091	8,284
Naphtha and Other Oils for Petro. Feed. ....	0	523	0	212	0	0	0	0	17	718	523
Special Naphthas .....	0	73	14	40	0	0	0	0	3	125	287
Lubricants .....	0	371	(5)	-3	0	141	0	0	47	462	1,226
Waxes .....	0	68	2	1	0	0	0	0	5	66	53
Petroleum Coke .....	0	2,950	0	-58	0	0	0	0	1,888	1,004	2,149
Asphalt and Road Oil .....	0	2,274	0	77	0	0	0	0	4	2,347	1,574
Still Gas .....	0	3,468	0	0	0	0	0	0	0	3,468	0
Miscellaneous Products .....	0	213	8	6	0	0	0	0	5	222	245
<b>Total</b> .....	<b>89,744</b>	<b>69,527</b>	<b>7,163</b>	<b>3,404</b>	<b>-5,267</b>	<b>-16,311</b>	<b>23</b>	<b>65,564</b>	<b>10,373</b>	<b>72,300</b>	<b>171,931</b>

<sup>1</sup> Unaccounted for crude oil is a balancing item.<sup>2</sup> Includes natural gasoline, isopentane, unfractionated stream, and plant condensate.

(5) Less than 500 barrels.

E Estimated.

Note: Total may not equal sum of components due to independent rounding.

Sources and estimation procedures: See Explanatory Notes on Data Collection and Estimation.

Table 11. Production of Crude Oil (including Lease Condensate) by PAD District and State, for the Most Currently Available Month, 1 August 1983  
(Thousand Barrels)

PAD District and State	Production	
	Total	Daily Average
<b>PAD District I</b>		
Florida .....	1,581	51
New York .....	E 71	E 2
Pennsylvania .....	E 364	E 12
Virginia .....	E 4	E 0
West Virginia .....	338	11
Adjustment 2 .....	100	3
Total PAD District I .....	E 2,458	E 79
<b>PAD District II</b>		
Illinois .....	2,460	79
Indiana .....	495	16
Kansas .....	6,344	205
Kentucky .....	678	22
Michigan .....	E 2,487	E 80
Missouri .....	E 17	E 1
Nebraska .....	545	18
North Dakota .....	4,204	136
Ohio .....	E 1,238	E 40
Oklahoma .....	13,985	451
South Dakota .....	103	3
Tennessee .....	94	3
Adjustment 2 .....	-171	-6
Total PAD District II .....	E 32,479	E 1,048
<b>PAD District III</b>		
Alabama .....	1,592	51
Arkansas .....	E 1,601	E 52
Louisiana .....		
Gulf Coast .....	E 37,449	E 1,208
Rest Of State .....	2,832	91
Total Louisiana .....	E 40,281	E 1,299
Mississippi .....	2,671	86
New Mexico .....		
Northwestern .....	555	18
Southeastern .....	5,847	189
Total New Mexico .....	6,402	207
Texas .....		
TRRC District 01 .....	2,090	67
TRRC District 02 .....	3,396	110
TRRC District 03 .....	E 10,305	E 332
TRRC District 04 .....	2,947	76
TRRC District 05 .....	776	25
TRRC District 06 .....	3,490	113
TRRC District 06B .....	2,876	93
TRRC District 07 .....	2,897	93
TRRC District 07C .....	19,379	625
TRRC District 08 .....	19,009	613
TRRC District 08A .....	3,218	104
TRRC District 09 .....	1,767	57
TRRC District 10 .....	4,304	139
East Texas .....	E 75,854	E 2,447
Adjustment 2 .....	97	3
Total PAD District III .....	E 128,498	E 4,145

See footnotes at end of table.

—Continued

PAD District and State	Production	
	Total	Daily Average
<b>PAD District IV</b>		
Colorado .....	2,419	78
Montana .....	2,468	80
Utah .....	E 2,446	E 79
Wyoming .....	E 9,607	E 310
Adjustment 2 .....	225	7
Total PAD District IV .....	E 17,165	E 554
<b>PAD District V</b>		
Alaska .....		
South Alaska .....	2,015	65
North Slope .....	50,600	1,632
Adjustment for Alaska <sup>2</sup> .....	466	15
Total Alaska .....	53,081	1,712
Arizona .....	20	1
California .....		
Central Coastal .....	6,369	205
East Central .....	21,502	694
North .....	15	(s)
South .....	6,561	212
Total California .....	34,447	1,111
Nevada .....	57	2
Adjustment for Arizona, California, and Nevada <sup>2</sup> .....	29	1
Total PAD District V .....	87,634	2,827
<b>United States Total</b> .....	E 268,234	E 8,653

<sup>1</sup> Includes the following offshore production (thousands of barrels):

Alaska: 2,000;  
California: Federal- 2,621, State- 3,100;  
Louisiana: Federal- E 24,900, State- 2,209;  
Texas: Federal- E 1,653, State- 216;  
U.S. Total- E 36,699.

<sup>2</sup> These adjustments are used to reconcile the national and PADD level sums of the State data with the independently estimated U.S. and Alaskan figures shown in the Summary Statistics portion of this issue and with the PADD level figures published in a previous issue. Final data at the State, PAD District and national levels will be published without adjustments in the Petroleum Supply Annual.

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

E = Data not available.

E = Estimated.

Table 12. Natural Gas Processing Plant Production of Petroleum Products by PAD District,<sup>1</sup> October 1983  
(Thousand Barrels)

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		Rocky Mt.	Dist. V West Coast
Natural Gas Liquids .....	414	422	836	1	1,696	499	7,152	9,348	20,408	3,193	7,458	730	3,811	35,600	2,548	1,054	49,386
Natural Gasoline and Isopentane .....	48	45	93	0	71	72	1,431	1,574	1,558	-1,013	1,320	123	376	2,364	347	436	4,814
Unfractionated Stream .....	0	41	41	1	635	109	-2,312	-1,567	11,631	-11,667	379	67	2,355	2,765	1,126	-5	2,360
Plant Condensate .....	0	0	0	0	19	27	50	96	197	70	32	18	4	321	140	0	557
Liquefied Petroleum Gases .....	366	336	702	0	971	291	7,983	9,245	7,022	15,803	5,727	522	1,076	30,150	935	623	41,655
Ethane .....	114	177	291	0	451	0	1,092	1,483	944	3,881	1,960	34	101	6,920	18	0	8,712
Propane .....	149	105	254	0	392	183	2,813	3,388	2,693	4,710	1,779	169	475	9,826	649	364	14,481
Butane .....	86	36	122	0	76	96	1,157	1,329	956	2,612	676	204	249	4,697	263	214	6,625
Ethane-Propane Mixtures .....	0	0	0	0	0	0	5	5	57	45	1	13	0	116	0	35	156
Ethane-Propane Mixtures .....	0	0	0	0	0	0	2,506	2,506	2,109	3,072	722	2	164	6,069	0	0	8,575
Isobutane .....	17	18	35	0	52	12	470	534	263	1,483	589	100	87	2,522	5	10	3,106
Finished Petroleum Products .....	43	0	43	0	1	0	5	6	264	7	0	5	2	278	7	0	334
Finished Motor Gasoline .....	43	0	43	0	0	0	0	0	0	0	0	0	0	0	4	0	47
Finished Leaded Motor Gasoline .....	25	0	25	0	0	0	0	0	0	0	0	0	0	0	4	0	29
Finished Unleaded Motor Gasoline .....	18	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Finished Aviation Gasoline .....	0	0	0	0	0	0	0	0	159	0	0	0	0	159	0	0	159
Naphtha-Type Jet Fuel .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kerosene-Type Jet Fuel .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kerosene .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distillate Fuel Oil .....	0	0	0	0	0	0	0	0	1	0	0	1	2	4	0	0	4
Special Naphthas .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous Products .....	0	0	0	0	1	0	5	6	81	0	0	0	0	81	0	0	81
Total Production .....	457	422	879	1	1,697	499	7,157	9,354	20,672	3,200	7,458	735	3,813	35,878	2,555	1,054	49,720

<sup>1</sup> Production represents quantity of natural gas processing plant output less input to fractionating facilities.  
Source: See Explanatory Notes on Data Collection and Estimation.

Table 13. Refinery Input of Crude Oil and Petroleum Products by PAD District, October 1983  
(Thousand Barrels, Except Where Noted)

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States
	East Coast #1	Appalachian #2	Total	Ind., Ill., Ky.	Minn., Wisc., Daks.	Okl., Kans., Mo.	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.	Dist. V West Coast	
Crude Oil (including lease condensate) .....	28,147	2,477	30,624	1,940	56,692	6,868	18,849	84,349	14,841	93,093	57,062	5,268	1,684	171,948	365,314
Natural Gas Liquids															
Natural Gasoline and Isopentane .....	101	0	101	0	484	151	908	1,543	1,227	1,618	365	40	101	272	5,369
Unfractionated Stream .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plant Condensate .....	0	0	0	68	0	12	80	0	485	0	183	1	669	50	799
Liquefied Petroleum Gases .....	28	6	32	160	1,779	287	1,060	3,286	734	1,641	1,588	146	38	509	8,307
Ethane .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69
Propane .....	0	0	0	0	0	0	0	68	27	0	45	0	72	5	149
Butane .....	0	0	0	80	977	224	656	1,937	321	1,376	1,243	33	0	268	5,403
Butane-Propane Mixtures .....	0	0	0	0	5	0	0	5	0	83	44	0	15	62	302
Ethane-Propane Mixtures .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Isobutane .....	26	0	26	80	729	63	404	1,276	386	182	157	113	23	175	2,384
Other Liquids															
Other Hydrocarbons and Alcohol .....	106	0	106	0	371	0	0	371	30	535	300	0	3	868	1,850
Unfinished Oil (net) .....	2,974	29	3,003	34	-2,052	-122	28	-2,112	181	6,657	2,630	300	5	9,773	9,506
Motor Gasoline Blending Components (net) .....	1,394	-10	1,384	-3	809	-20	622	1,408	-92	-124	2,091	-26	17	1,866	4,214
Aviation Gasoline Blending Components (net) .....	-5	0	-5	0	11	0	-1	10	0	2	-19	0	0	-17	2
Total Input to Refineries .....	32,743	2,502	35,245	2,131	58,162	7,164	21,478	88,935	16,921	103,907	63,987	5,911	1,849	192,575	395,361
Crude Oil Distillation															
Gross Input (daily average) .....	935	80	1,014	69	1,845	232	610	2,756	487	3,078	1,854	171	55	5,645	11,974
Operable Capacity (daily average) .....	1,473	174	1,647	66	2,351	295	814	3,526	611	3,903	2,547	295	107	7,463	16,313
Operating Ratio (percent) <sup>1</sup> .....	63.5	45.9	61.6	104.3	78.5	78.6	75.0	78.2	79.7	78.9	72.8	58.0	51.0	75.6	73.4
Crude Oil Qualities															
Sulfur Content, Weighted Average (percent) .....	1.02	.36	.96	.67	.93	1.47	.57	.88	.63	1.00	.99	1.50	.53	.98	.95
API Gravity, Weighted Average .....	31.02	40.93	31.88	36.21	35.34	32.00	37.79	35.64	37.55	34.61	33.89	31.93	39.82	35.55	33.02
Operable Capacity (daily average)															
Operating .....	1,473	174	1,647	66	2,351	295	814	3,526	611	3,903	2,547	295	107	7,463	16,313
Idle .....	1,329	110	1,439	66	2,189	253	722	3,230	557	3,579	2,109	227	107	6,580	14,627
Total .....	143	64	208	0	161	42	92	296	53	324	439	58	0	884	1,687

<sup>1</sup> Represents gross input divided by operable capacity.  
Note: Total may not equal sum of components due to independent rounding.  
Source: See Explanatory Notes on Data Collection and Estimation.

Table 14. Refinery Production of Petroleum Products by PAD District, October 1983  
(Thousand Barrels)

Commodity	PAD District I			PAD District II					PAD District III				Total		PAD District IV			United States
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.	Dist. V West Coast		
Liquefied Refinery Gases .....	921	19	940	40	1,604	306	348	2,288	273	3,031	2,822	83	63	6,272	70	1,082	10,662	
For Petrochemical Feedstock Use .....	270	0	270	0	215	7	44	266	41	1,593	1,568	19	0	3,221	11	144	3,912	
For Other Uses .....	651	19	670	40	1,389	299	304	2,022	232	1,438	1,254	64	63	3,051	59	938	6,750	
Ethane .....	0	0	0	0	0	21	0	21	0	602	2	0	0	604	0	0	625	
For Petrochemical Feedstock Use .....	0	0	0	0	0	0	0	0	0	443	2	0	0	445	0	0	445	
For Other Uses .....	0	0	0	0	0	21	0	21	0	159	0	0	0	159	0	0	180	
Propane .....	792	19	811	40	1,570	278	478	2,366	210	2,569	1,403	52	27	4,061	165	813	8,216	
For Petrochemical Feedstock Use .....	229	0	229	0	190	0	44	234	41	917	226	0	0	1,184	0	104	1,751	
For Other Uses .....	563	19	582	40	1,380	278	434	2,132	169	1,452	1,177	52	27	2,877	165	709	6,465	
Butane .....	129	0	129	0	13	7	-130	-110	61	-46	1,415	30	20	1,480	-83	227	1,643	
For Petrochemical Feedstock Use .....	41	0	41	0	0	7	0	7	0	217	1,340	19	0	1,576	1	40	1,665	
For Other Uses .....	88	0	88	0	13	0	-130	-117	61	-263	75	11	20	-96	-84	187	-22	
Butane-Propane Mixtures .....	0	0	0	0	-4	0	0	-4	2	90	2	1	16	111	-22	42	127	
For Petrochemical Feedstock Use .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
For Other Uses .....	0	0	0	0	-4	0	0	-4	2	90	2	1	16	111	-22	42	127	
Isobutane for Petro. Feed. Use .....	0	0	0	0	25	0	0	25	0	16	0	0	0	16	10	0	51	
Finished Motor Gasoline .....	15,555	909	16,464	1,203	32,635	3,782	12,996	50,016	9,065	46,218	31,339	1,750	860	89,232	6,479	29,580	191,771	
Finished Leaded Motor Gasoline .....	5,669	411	6,080	615	14,369	2,148	7,211	24,343	4,822	17,449	13,408	698	513	36,890	4,096	13,295	84,704	
Finished Unleaded Motor Gasoline .....	9,886	498	10,384	588	18,266	1,634	5,185	25,673	4,243	28,769	17,931	1,052	347	52,342	2,383	16,285	107,067	
Finished Aviation Gasoline .....	22	0	22	0	62	0	9	71	18	231	144	0	0	393	30	163	679	
Naphtha-Type Jet Fuel .....	267	43	310	62	494	80	313	949	620	810	232	174	213	2,049	393	1,295	4,996	
Kerosene-Type Jet Fuel .....	769	0	769	30	3,285	252	672	4,239	627	7,224	5,753	1	24	13,629	611	6,999	26,247	
Kerosene .....	-27	60	33	60	725	48	-94	739	-3	1,547	1,578	23	11	3,156	24	298	4,250	
Disillate Fuel Oil .....	7,891	718	8,609	520	11,545	1,870	5,539	19,474	3,643	22,398	11,966	1,657	579	40,243	3,724	11,081	83,131	
Residual Fuel Oil .....	2,302	121	2,423	75	1,494	254	183	2,006	563	6,678	3,416	260	36	10,953	298	9,089	24,789	
Naphtha < 400 Deg. For Petro. Feed. Use .....	315	0	315	0	508	0	85	593	489	2,588	196	103	0	3,376	0	112	4,396	
Other Oils > 400 Deg. For Petro. Feed. Use .....	4	0	4	0	155	0	6	161	190	5,442	1,966	0	0	7,598	1	411	8,175	
Special Naphthas .....	5	21	26	0	342	0	209	551	25	1,075	80	135	0	1,315	1	73	1,966	
Lubricants .....	331	343	674	0	501	0	383	884	18	1,825	787	348	0	2,978	27	371	4,934	
Waxes .....	25	72	97	0	11	0	43	54	4	110	81	61	0	256	10	68	485	
Petroleum Coke .....	1,172	18	1,190	22	2,247	297	620	3,186	301	2,778	2,252	102	11	5,444	278	2,950	13,048	
Marketable .....	498	0	498	0	1,255	174	408	1,837	57	1,340	1,526	74	0	2,997	122	2,259	7,713	
Catalyst .....	674	18	692	22	992	123	212	1,349	244	1,438	726	28	11	2,447	156	691	5,335	
Asphalt and Road Oil .....	2,938	50	2,988	128	2,569	346	528	3,571	605	728	1,382	1,034	38	3,787	715	2,274	13,335	
Still Gas .....	1,577	96	1,673	64	2,489	227	752	3,532	464	4,799	2,323	206	28	7,820	507	3,468	17,000	
For Petrochemical Feedstock Use .....	265	0	265	0	2	0	0	2	6	414	83	0	0	503	32	247	1,049	
For Other Uses .....	1,312	96	1,408	64	2,487	227	752	3,530	458	4,385	2,240	206	28	7,317	475	3,221	15,951	
Miscellaneous Products .....	93	37	130	3	74	16	55	148	96	686	233	19	0	1,034	45	213	1,570	
Fuel Use .....	0	1	1	0	1	0	15	16	0	19	103	0	0	122	9	40	188	
Non-Fuel Use .....	93	36	129	3	73	16	40	132	96	667	130	19	0	912	36	173	1,382	
Total Production .....	34,160	2,507	36,667	2,207	60,740	7,478	22,047	92,472	16,998	108,168	66,550	5,956	1,863	199,535	13,213	69,527	411,414	
Processing Gain(-) or Loss(+) <sup>1</sup> .....	-1,417	-5	-1,422	-76	-2,578	-314	-569	-3,537	-77	-4,261	-2,563	-45	-14	-6,960	-171	-3,963	-16,053	

<sup>1</sup> Represents the arithmetic difference between input and output.

<sup>1</sup> Represents the arithmetic difference between input and output.

Note: See Explanatory Note on negative production.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 15. Percent Refinery Yield of Petroleum Products by PAD District,<sup>1</sup> October 1983

Commodity	PAD District I			PAD District II				PAD District III				PAD District IV		United States
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okl., Kans., Mo.	Texas Inland	Texas Gulf Coast	La., Gulf Coast	No. La., Ark.	Total	Rocky Mtn.	West Coast
Finished Motor Gasoline <sup>2</sup>	44.8	36.4	44.1	53.0	53.3	49.9	51.9	47.7	42.2	45.3	25.3	43.1	47.6	44.4
Finished Aviation Gasoline <sup>3</sup>	.1	.0	.1	.0	.1	.0	.1	.1	.2	.3	.0	.2	.2	.2
Liquefied Refinery Gases	3.0	.8	2.8	2.0	2.9	4.5	1.8	1.8	3.0	4.7	1.5	3.5	.6	1.7
Naphtha-Type Jet Fuel	.9	1.7	.9	3.1	.9	1.2	1.7	4.1	.8	.4	3.1	1.1	3.1	2.0
Kerosene-Type Jet Fuel	2.5	0	2.3	1.5	6.0	3.7	3.6	4.2	7.2	9.6	.0	7.5	4.9	10.8
Kerosene	-1	2.4	.1	3.0	1.3	.7	-5	.0	1.6	2.6	.4	.7	.2	.5
Distillate Fuel Oil	25.4	28.7	25.6	26.3	21.1	27.7	29.3	24.3	22.5	20.0	29.8	22.1	29.7	17.1
Residual Fuel Oil	7.4	4.8	7.2	3.8	2.7	3.8	1.0	3.7	6.7	5.7	4.7	6.0	2.4	14.0
Naphtha < 400 Deg. F. Petro. Feed. Use	1.0	0	.9	0	.9	0	.5	3.3	2.6	.3	1.8	0	1.9	.2
Other Oils > 400 Deg. F. Petro. Feed. Use	.0	0	.0	0	.3	0	.0	1.3	5.5	3.3	0	0	4.2	.6
Special Naphthas	1.1	13.7	2.0	0	.6	0	1.1	.2	1.1	.1	2.4	.7	.0	.1
Lubricants	.1	2.9	.3	0	.0	0	2.0	.1	1.8	1.3	6.3	0	1.6	.2
Waxes	.1	2.9	.3	0	.0	0	.2	.0	.1	.1	1.1	0	.1	.1
Petroleum Coke	3.8	.7	3.5	1.1	4.1	4.4	3.3	2.0	2.8	3.8	1.8	.7	3.0	4.6
Asphalt and Road Oil	9.4	2.0	8.9	6.5	4.7	5.1	2.8	4.0	.7	2.3	18.6	2.2	5.7	3.5
Still Gas	5.1	3.8	5.0	3.2	4.6	3.4	4.0	3.1	4.8	3.9	3.7	1.7	4.3	5.4
Miscellaneous Products	.3	1.5	.4	.2	.1	.2	.3	.6	.7	.4	.3	.6	.4	.3
Processing Gain(-) or Loss(+) <sup>4</sup>	-4.6	-2	-4.2	-3.9	-4.7	-4.7	-3.0	-5	-4.3	-4.3	-8	-3.8	-1.4	-6.1
								-4.3						-4.3

<sup>1</sup> Based on crude oil input and net returns of unfinished oils.<sup>2</sup> Based on total finished motor gasoline output plus net output of motor gasoline blending components, minus input of natural gas plant liquids, other hydrocarbons and alcohol.<sup>3</sup> Based on finished aviation gasoline output plus net output of aviation gasoline blending components.<sup>4</sup> Represents the difference between input and production.

Note: Totals may not equal sum of components due to independent rounding.

Note: See Explanatory Note on negative production.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 16. Imports of Crude Oil and Petroleum Products by PAD District, October 1983  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					
	I	II	III	IV	V	Total
<b>Crude Oil (including lease condensate) <sup>1 2</sup></b>	<b>23,780</b>	<b>14,247</b>	<b>62,163</b>	<b>1,345</b>	<b>5,286</b>	<b>106,820</b>
<b>Natural Gas Liquids</b>						
Natural Gasoline and Isopentane	451	2,928	1,245	587	282	5,493
Plant Condensate	(s)	0	278	0	0	279
Liquefied Petroleum Gases	124	0	0	122	0	246
Ethane	327	2,928	966	465	282	4,969
Propane	0	564	0	0	0	564
Butane	112	770	0	237	99	1,218
Butane-Propane Mixtures	216	1,023	336	228	183	1,986
Ethane-Propane Mixtures	0	0	631	0	0	631
Other Liquids <sup>1</sup>	0	571	0	0	0	571
<b>Other Liquids <sup>1</sup></b>						
Unfinished Oils <sup>1</sup>	4,021	193	3,749	93	193	8,249
Motor Gasoline Blending Components	3,732	193	3,581	93	29	7,629
Aviation Gasoline Blending Components	289	0	168	0	164	620
Other	0	0	0	0	0	0
<b>Finished Petroleum Products</b>						
Finished Motor Gasoline	36,241	1,266	3,131	341	1,403	42,382
Finished Leaded Motor Gasoline	9,178	71	533	161	437	10,379
Finished Unleaded Motor Gasoline	2,928	56	533	132	177	3,825
Finished Aviation Gasoline	6,250	15	0	29	260	6,554
Naphtha-Type Jet Fuel	(s)	0	0	0	0	(s)
Kerosene-Type Jet Fuel	0	0	0	0	0	0
Bonded Aircraft Fuel	1,453	0	3	0	78	1,534
Other	0	0	0	0	0	0
Kerosene	1,453	0	3	0	78	1,534
Distillate Fuel Oil	330	0	28	0	(s)	358
Bonded Ships Bunkers	7,515	136	8	141	98	7,899
Other	0	0	0	0	0	0
Residual Fuel Oil	7,515	136	8	141	98	7,899
Bonded Ships Bunkers	17,100	298	1,444	39	765	19,645
Other	0	0	0	0	0	0
Naphtha < 400 Deg. for Petro. Feed. Use	17,100	298	1,444	39	765	19,645
Other Oils > 400 Deg. for Petro. Feed. Use	11	13	129	0	0	153
Special Naphthas	1	1	0	0	0	2
Lubricants	9	159	734	0	14	916
Waxes	376	11	7	(s)	(s)	394
Asphalt and Road Oil	6	2	0	0	2	11
Miscellaneous Products	259	3	0	0	0	262
Other	3	571	245	(s)	8	828
<b>Total Imports</b>	<b>64,493</b>	<b>18,633</b>	<b>70,287</b>	<b>2,367</b>	<b>7,163</b>	<b>162,944</b>

<sup>1</sup> Crude oil and unfinished oils are reported by the PAD District in which they are to be processed; all other products are reported by the PAD District of entry.

<sup>2</sup> Includes crude oil imported for storage in the Strategic Petroleum Reserve.

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 17. Imports Of Crude Oil and Petroleum Products by Source and PAD District, October 1983  
(Thousand Barrels)

Source	Crude Oil 1	LPG	Unfin- ished Oils	Gasoline Blending Compo- nents	Finished Motor Gasoline	Jet Fuel	Kero- sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod- ucts 2	Total Prod- ucts	Total Petro- leum	Total (Daily Average)
All PAD Districts														
<b>Arab OPEC</b>														
Algeria	6,024	0	200	0	0	0	0	248	1,088	258	278	2,073	8,097	261
Iraq	439	0	0	0	0	0	0	0	0	0	0	0	439	14
Kuwait	249	0	0	0	0	0	0	0	0	0	0	0	249	8
Saudi Arabia	18,629	336	246	0	0	0	0	0	582	0	0	1,164	19,792	638
United Arab Emirates	500	0	0	0	0	0	0	0	0	0	0	0	500	16
Subtotal Arab OPEC	25,840	336	447	0	0	0	0	248	1,669	258	278	3,237	29,077	938
<b>Other OPEC</b>														
Ecuador	2,162	0	15	0	0	0	0	0	0	0	0	15	2,177	70
Gabon	2,362	0	0	0	0	0	0	0	0	0	0	0	2,362	76
Indonesia	10,711	0	0	0	97	35	0	0	561	0	0	693	11,404	368
Iran	360	0	0	0	0	0	0	0	0	0	0	0	360	12
Nigeria	9,451	0	0	0	0	0	0	50	19	0	0	69	9,520	307
Venezuela	4,718	0	0	0	1,790	215	261	1,320	1,906	228	0	5,720	10,438	337
Subtotal Other OPEC	29,765	0	15	0	1,887	250	281	1,370	2,486	228	0	6,497	36,262	1,170
<b>Other</b>														
Angola	1,119	0	0	0	0	0	0	0	318	0	0	318	1,437	46
Bahamas	0	0	2,122	0	0	563	0	310	1,652	198	245	5,090	5,090	164
Brazil	0	0	0	0	263	0	0	0	0	0	(s)	263	263	8
Canada	8,642	3,893	287	(s)	591	0	11	1,400	723	218	943	8,067	16,709	539
Congo	0	0	0	0	0	0	0	0	174	0	0	174	174	6
Egypt	389	0	21	0	0	0	0	0	0	0	0	21	411	13
France	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Malaysia	0	0	0	0	53	6	0	0	37	0	0	96	96	3
Mexico	21,564	631	7	289	203	3	28	201	967	1	2	2,332	23,896	771
Netherlands	0	0	588	0	732	0	0	1,349	341	0	(s)	3,009	3,009	97
Netherlands Antilles	0	109	653	0	416	0	0	409	3,548	0	199	5,335	5,335	172
Norway	998	0	0	0	0	0	0	0	0	0	0	0	998	32
People's Republic of China	1,552	0	0	331	501	0	0	0	0	0	0	832	2,384	77
Peru	0	0	0	0	778	0	0	185	237	0	0	237	237	8
Puerto Rico	0	0	205	0	0	0	27	0	0	0	290	1,487	1,487	48
Romania	0	0	210	0	1,682	0	0	0	0	0	0	1,872	1,872	60
Spain	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Trinidad and Tobago	2,749	0	0	0	0	0	0	212	313	0	0	525	3,273	106
United Kingdom	12,256	0	0	0	323	0	0	0	183	0	77	583	12,838	414
Virgin Islands	0	0	1,583	0	2,134	675	31	2,111	4,993	0	45	11,472	11,472	370
Zaire	540	0	0	0	0	0	0	0	0	0	0	0	540	17
Other Western Hemisphere	279	0	0	0	0	0	0	6	1,167	13	84	1,269	1,548	50
Other Eastern Hemisphere	1,127	(s)	1,489	0	836	37	0	97	936	(s)	11	3,406	4,534	146
Subtotal Other	51,215	4,633	7,167	620	8,493	1,284	97	6,281	15,490	429	1,896	45,390	97,605	3,149
<b>Total Imports</b>	<b>106,820</b>	<b>4,969</b>	<b>7,629</b>	<b>620</b>	<b>10,379</b>	<b>1,534</b>	<b>358</b>	<b>7,899</b>	<b>19,645</b>	<b>916</b>	<b>2,175</b>	<b>56,124</b>	<b>162,944</b>	<b>5,256</b>

See footnotes at end of table.



Table 17. Imports Of Crude Oil and Petroleum Products by Source and PAD District, October 1983  
(Thousand Barrels) (continued)

Source	Crude Oil 1	LPG	Unfin- ished Oils	Gasoline Blending Compo- nents	Finished Motor Gasoline	Jet Fuel	Kero- sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod- ucts 2	Total Prod- ucts	Total Petro- leum	Total (Daily Average)
PAD District I														
<b>Arab OPEC</b>														
Algeria .....	1,993	0	200	0	0	0	0	248	1,088	0	0	1,536	3,529	114
Saudi Arabia .....	858	0	246	0	0	0	0	0	0	0	0	246	1,104	36
United Arab Emirates .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal Arab OPEC .....	2,851	0	447	0	0	0	0	248	1,088	0	0	1,783	4,633	149
<b>Other OPEC</b>														
Gabon .....	958	0	0	0	0	0	0	0	0	0	0	0	958	31
Indonesia .....	3,146	0	0	0	0	0	0	0	0	0	0	0	3,146	101
Nigeria .....	1,600	0	0	0	0	0	0	50	19	0	0	69	1,670	54
Venezuela .....	2,549	0	0	0	1,790	215	261	1,320	1,674	0	0	5,260	7,808	252
Subtotal Other OPEC .....	8,252	0	0	0	1,790	215	261	1,370	1,693	0	0	5,329	13,581	438
<b>Other</b>														
Angola .....	1,119	0	0	0	0	0	0	0	318	0	0	318	1,437	46
Bahamas .....	0	0	436	0	0	563	0	310	1,652	0	0	2,962	2,962	96
Brazil .....	0	0	0	0	263	0	0	0	0	0	0	263	263	8
Canada .....	912	218	0	(s)	359	0	11	1,123	387	9	210	2,318	3,229	104
Congo .....	0	0	0	0	0	0	0	0	174	0	0	174	174	6
Egypt .....	389	0	21	0	0	0	0	0	0	0	0	21	411	13
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Mexico .....	3,650	0	0	289	0	0	0	198	957	0	0	1,443	5,093	164
Netherlands .....	0	0	588	0	732	0	0	1,349	341	0	(s)	3,009	3,009	97
Netherlands Antilles .....	0	109	453	0	416	0	0	409	3,356	0	199	4,943	4,943	159
Norway .....	568	0	0	0	0	0	0	0	0	0	0	0	568	18
People's Republic of China .....	536	0	0	0	0	0	0	0	0	0	0	0	536	17
Peru .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Puerto Rico .....	0	0	206	0	778	0	27	185	237	0	0	237	536	17
Romania .....	0	0	210	0	1,662	0	0	0	0	0	290	1,487	1,487	8
Spain .....	0	0	0	0	0	0	0	0	0	0	0	1,872	1,872	48
Trinidad and Tobago .....	(s)	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	60
United Kingdom .....	4,444	0	0	0	0	0	0	212	313	0	0	525	525	17
Virgin Islands .....	0	0	0	0	323	0	0	0	183	0	77	563	5,027	162
Zaire .....	540	0	533	0	2,134	675	31	2,111	4,699	0	0	10,183	10,183	328
Other Western Hemisphere .....	0	0	0	0	0	0	0	0	0	0	0	0	540	17
Other Eastern Hemisphere .....	518	(s)	838	0	0	0	0	0	1,167	0	0	1,167	1,167	38
Subtotal Other .....	12,677	327	3,286	289	7,388	1,238	69	5,897	14,319	9	781	33,602	46,279	1,493
<b>Total Imports</b> .....	23,780	327	3,732	289	9,178	1,453	330	7,515	17,100	9	781	40,714	64,493	2,080
PAD District II														
<b>Arab OPEC</b>														
Saudi Arabia .....	1,343	0	0	0	0	0	0	0	0	0	0	0	1,343	43
Subtotal Arab OPEC .....	1,343	0	0	0	0	0	0	0	0	0	0	0	1,343	43

See footnotes at end of table.

Table 17. Imports Of Crude Oil and Petroleum Products by Source and PAD District, October 1983  
(Thousand Barrels) (continued)

Source	Crude Oil 1	LPG	Unfin-ished Oils	Gasoline Blending Components	Finished Motor Gasoline	Jet Fuel	Kero-sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod-ucts 2	Total Prod-ucts	Total Petro-leum	Total (Daily Average)
PAD District II														
<b>Other OPEC</b>														
Iran .....	360	0	0	0	0	0	0	0	0	0	0	0	360	12
Nigeria .....	457	0	0	0	0	0	0	0	0	0	0	0	457	15
Subtotal Other OPEC .....	817	0	0	0	0	0	0	0	0	0	0	0	817	26
<b>Other</b>														
Canada .....	6,235	2,928	193	0	71	0	0	136	298	159	602	4,386	10,621	343
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Mexico .....	4,385	0	0	0	0	0	0	0	0	0	0	0	4,385	141
Trinidad and Tobago .....	368	0	0	0	0	0	0	0	0	0	0	0	368	28
United Kingdom .....	459	0	0	0	0	0	0	0	0	0	0	0	459	15
Other Western Hemisphere .....	139	0	0	0	0	0	0	0	0	0	0	0	139	4
Other Eastern Hemisphere .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Subtotal Other .....	12,087	2,928	193	0	71	0	0	136	298	159	602	4,386	16,473	531
<b>Total Imports</b> .....	14,247	2,928	193	0	71	0	0	136	298	159	602	4,386	18,633	601
PAD District III														
<b>Arab OPEC</b>														
Algeria .....	4,031	0	0	0	0	0	0	0	0	258	278	537	4,568	147
Iraq .....	439	0	0	0	0	0	0	0	0	0	0	0	439	14
Kuwait .....	249	0	0	0	0	0	0	0	0	0	0	0	249	8
Saudi Arabia .....	16,428	336	0	0	0	0	0	0	582	0	0	917	17,345	560
United Arab Emirates .....	500	0	0	0	0	0	0	0	0	0	0	0	500	16
Subtotal Arab OPEC .....	21,647	336	0	0	0	0	0	0	582	258	278	1,454	23,101	745
<b>Other OPEC</b>														
Ecuador .....	2,162	0	15	0	0	0	0	0	0	0	0	15	2,177	70
Gabon .....	1,404	0	0	0	0	0	0	0	0	0	0	0	1,404	45
Indonesia .....	2,430	0	0	0	0	0	0	0	434	0	0	434	2,864	92
Nigeria .....	7,394	0	0	0	0	0	0	0	0	0	0	0	7,394	239
Venezuela .....	2,169	0	0	0	0	0	0	0	232	228	0	460	2,630	85
Subtotal Other OPEC .....	15,560	0	15	0	0	0	0	0	666	228	0	910	16,469	531
<b>Other</b>														
Bahamas .....	0	0	1,686	0	0	0	0	0	0	198	245	2,129	2,129	69
Canada .....	(s)	0	0	0	0	0	0	0	0	36	0	36	36	1
France .....	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)	(s)
Mexico .....	13,529	631	7	(s)	203	3	28	2	2	1	(s)	878	14,407	465
Netherlands Antilles .....	0	0	199	0	0	0	0	0	0	0	0	199	199	6
Norway .....	430	0	0	0	0	0	0	0	0	0	0	0	430	14
People's Republic of China .....	1,016	0	0	167	329	0	0	0	0	0	0	497	1,513	49
Trinidad and Tobago .....	1,880	0	0	0	0	0	0	0	0	0	0	0	1,880	61
United Kingdom .....	7,352	0	0	0	0	0	0	0	0	0	0	0	7,352	237
Virgin Islands .....	0	0	1,050	0	0	0	0	0	194	0	45	1,290	1,290	42

See footnotes at end of table.

Table 17. Imports Of Crude Oil and Petroleum Products by Source and PAD District, October 1983  
(Thousand Barrels) (continued)

Source	Crude Oil 1	LPG	Unfin- ished Oils	Gasoline Blending Compo- nents	Finished Motor Gasoline	Jet Fuel	Kero- sene	Distil. Fuel Oil	Resid. Fuel Oil	Special Naphthas	Other Prod- ucts 2	Total Prod- ucts	Total Petro- leum	Total (Daily Average)
PAD District III														
Other														
Other Western Hemisphere	139	0	0	0	0	0	0	6	0	13	84	102	241	8
Other Eastern Hemisphere	609	0	623	0	0	0	0	0	0	0	7	629	1,239	40
Subtotal Other	24,956	631	3,566	168	533	3	28	8	197	248	380	5,761	30,717	991
Total Imports	62,163	966	3,581	168	533	3	28	8	1,444	734	659	8,125	70,287	2,267
PAD District IV														
Other														
Canada	1,345	465	93	0	161	0	0	141	39	0	123	1,022	2,367	76
Subtotal Other	1,345	465	93	0	161	0	0	141	39	0	123	1,022	2,367	76
Total Imports	1,345	465	93	0	161	0	0	141	39	0	123	1,022	2,367	76
PAD District V														
Other OPEC														
Indonesia	5,135	0	0	0	97	35	0	0	127	0	0	259	5,394	174
Subtotal Other OPEC	5,135	0	0	0	97	35	0	0	127	0	0	259	5,394	174
Other														
Canada	150	282	1	0	0	0	(s)	0	0	14	8	305	455	15
Malaysia	0	0	0	0	53	6	0	0	37	0	0	96	96	3
Mexico	0	0	0	0	0	0	0	1	7	0	2	11	11	(s)
Netherlands Antilles	0	0	0	0	0	0	0	0	192	0	0	192	192	6
People's Republic of China	0	0	0	164	172	0	0	0	0	0	0	336	336	11
United Kingdom	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Eastern Hemisphere	0	0	28	0	115	37	0	97	402	0	1	680	680	22
Subtotal Other	150	282	29	164	340	43	(s)	98	638	14	10	1,619	1,769	57
Total Imports	5,286	282	29	164	437	78	(s)	98	765	14	10	1,878	7,163	231

1 Includes crude oil imported for storage in the Strategic Petroleum Reserve.

2 Includes aviation gasoline, waxes, asphalt, lubricants, natural gasoline, isopentane, plant condensate, naphthas less than 400 degrees F, other oils greater than 400 degrees F and miscellaneous products.

(s) Less than 500 barrels or less than 500 barrels per day.

Note: Totals may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

**Table 18. Exports Of Crude Oil And Petroleum Products By PAD District, October 1983**  
(Thousand Barrels)

Commodity	Petroleum Administration for Defense Districts					
	I	II	III	IV	V	Total
Crude Oil (including lease condensate) <sup>1</sup>	0	341	0	0	3,995	4,336
Liquefied Petroleum Gases	34	302	550	0	101	987
Ethane	0	0	(s)	0	0	(s)
Propane	18	121	354	0	40	534
Butane	16	180	195	0	61	453
Butane-Propane Mixtures	0	0	0	0	0	0
Finished Motor Gasoline	32	7	0	0	12	51
Naphtha-Type Jet Fuel	(s)	0	0	0	0	(s)
Kerosene-Type Jet Fuel	0	0	0	0	24	24
Kerosene	2	1	216	0	0	218
Distillate Fuel Oil	100	(s)	211	0	1,390	1,701
Residual Fuel Oil	(s)	0	1,849	0	2,882	4,732
Naphtha < 400 Deg. for Petrochem. Feedstock	49	4	218	1	15	285
Other Oils > 400 Deg. for Petrochem. Feedstock	(s)	41	164	0	2	207
Special Naphthas	5	1	39	(s)	3	47
Lubricants	127	21	287	1	47	483
Waxes	5	(s)	24	(s)	5	34
Petroleum Coke	30	63	2,732	0	1,888	4,713
Asphalt	2	1	(s)	1	4	8
Miscellaneous Products	14	2	6	0	5	27
Total Product Exports	400	442	6,295	2	6,378	13,518
Total Exports	400	783	6,295	2	10,373	17,853

<sup>1</sup> Exports of crude oil are prohibited by law. However, some crude oil is exchanged with Canada on a barrel for barrel basis, and crude oil is shipped to U.S. Territories (especially Puerto Rico and the Virgin Islands) to be refined there. The Statistical Tracking Systems count these exchanges and shipments as imports and exports.

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 19. Exports of Crude Oil and Petroleum Products by Destination, October 1983  
(Thousand Barrels)

Destination	Crude Oil 1	LPG	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthas	Lubri-cants	Waxes	Petro-leum Coke	Asphalt	Other	Total	Total (Daily Average)
Argentina	0	(s)	0	0	0	0	(s)	20	(s)	0	0	1	21	1
Australia	0	(s)	0	0	0	0	3	7	(s)	180	(s)	2	193	6
Bahamas	0	5	1	(s)	100	282	0	2	(s)	0	0	(s)	389	13
Bahrain	0	0	0	0	0	0	(s)	(s)	0	0	0	0	(s)	(s)
Belgium & Luxembourg	0	(s)	0	0	0	0	(s)	45	(s)	306	(s)	(s)	352	11
Brazil	0	0	0	0	0	0	0	(s)	0	0	0	(s)	(s)	(s)
Cameroon	0	0	0	0	0	0	0	0	0	0	0	(s)	(s)	(s)
Canada	341	308	48	0	242	185	4	57	2	127	2	287	1,604	52
Chile	0	0	0	0	0	0	1	15	(s)	82	(s)	1	1,144	37
China (Taiwan)	0	(s)	0	0	0	1,046	(s)	5	12	(s)	0	2	21	1
Costa Rica	0	1	0	0	0	0	(s)	1	(s)	0	0	4	5	(s)
Denmark	0	0	0	0	0	0	0	(s)	(s)	0	0	1	1	(s)
Dominican Republic	0	0	0	0	0	0	0	2	(s)	0	0	(s)	42	1
Ecuador	0	40	0	0	210	0	0	1	(s)	0	0	6	326	11
Egypt	0	108	0	0	0	0	(s)	(s)	0	146	0	(s)	146	5
El Salvador	0	(s)	0	0	0	0	4	11	(s)	0	(s)	1	15	(s)
Finland	0	0	0	0	0	0	0	(s)	0	0	0	(s)	(s)	(s)
France	0	0	0	0	0	0	(s)	1	1	815	0	74	892	29
French Pacific Isl	0	0	0	0	35	15	0	(s)	0	0	0	0	50	2
Ghana	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greece	0	0	0	0	0	0	0	1	0	74	0	1	76	2
Guatemala	0	66	0	0	0	0	0	4	(s)	0	0	1	71	2
Honduras	0	(s)	0	0	0	0	(s)	2	(s)	0	(s)	4	7	(s)
Hong Kong	0	(s)	(s)	0	0	217	(s)	2	(s)	0	(s)	1	221	7
India	0	0	0	0	0	0	0	22	0	0	0	(s)	100	3
Indonesia	0	1	0	0	0	0	(s)	15	0	83	0	0	(s)	(s)
Iran	0	0	0	0	0	0	0	(s)	0	0	0	(s)	(s)	(s)
Israel	0	0	0	0	0	0	0	(s)	0	0	0	(s)	(s)	(s)
Italy	0	0	0	0	0	0	0	(s)	0	0	0	(s)	(s)	(s)
Ivory Coast	0	2	0	0	0	0	0	1	1	670	0	90	763	25
Jamaica	0	0	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Japan	0	2	0	0	1,063	218	16	27	(s)	0	0	86	2,908	94
Jordan	0	1	0	0	0	507	0	4	3	1,227	0	0	247	8
Korea, Republic of	0	0	0	0	0	0	0	1	0	0	0	(s)	1	(s)
Kuwait	0	(s)	0	0	0	0	1	5	(s)	(s)	5	2	14	(s)
Lebanon	0	0	0	0	0	0	0	1	0	0	0	(s)	1	(s)
Liberia	0	0	0	0	0	0	0	1	0	0	0	0	1	(s)
Malaysia	0	(s)	0	0	0	0	0	(s)	0	0	0	(s)	1	(s)
Mexico	0	376	2	24	0	0	7	93	(s)	8	0	4	546	18
Netherlands	0	1	(s)	0	0	0	(s)	1	1	147	0	46	196	6
Netherlands Antilles	0	(s)	0	0	0	305	0	(s)	0	0	0	0	305	10
New Zealand	0	(s)	0	0	0	0	(s)	(s)	(s)	0	0	(s)	1	(s)
Nicaragua	0	0	0	0	0	0	0	(s)	0	0	0	1	(s)	(s)
Nigeria	0	0	0	0	0	0	0	(s)	0	0	0	1	105	3
Norway	0	0	0	0	0	0	0	(s)	0	105	0	0	(s)	(s)
Pacific Trust Terr.	0	(s)	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Panama	0	30	0	0	49	212	(s)	2	0	0	0	0	294	9
Peru	0	0	0	0	0	0	(s)	1	(s)	0	(s)	(s)	1	(s)
Philippines	0	0	0	0	0	0	(s)	4	(s)	0	(s)	3	8	(s)
Puerto Rico	0	29	0	0	0	189	(s)	16	(s)	(s)	(s)	9	244	8
Rep. of South Africa	0	1	0	0	0	0	(s)	25	-3	81	(s)	2	111	4
Saudi Arabia	0	2	0	0	0	0	(s)	19	0	0	0	1	23	1

See footnotes at end of table.

Table 19. Exports of Crude Oil and Petroleum Products by Destination, October 1983  
(Thousand Barrels)  
(continued)

Destination	Crude Oil <sup>1</sup>	LPG	Finished Motor Gasoline	Jet Fuel	Dist. Fuel Oil	Residual Fuel Oil	Special Naphthas	Lubri-cants	Waxes	Petro-leum Coke	Asphalt	Other	Total	Total (Daily Average)
Singapore	0	7	0	0	0	548	6	3	(s)	0	(s)	8	573	18
Spain	0	0	0	0	(s)	0	0	(s)	(s)	450	0	1	451	15
Surinam	0	(s)	0	0	0	0	0	1	0	0	0	(s)	1	(s)
Sweden	0	0	0	0	0	0	0	1	(s)	0	0	1	2	(s)
Switzerland	0	(s)	0	0	0	0	1	2	(s)	0	0	(s)	3	(s)
Thailand	0	0	0	0	0	0	0	15	(s)	0	0	(s)	16	1
Trinidad and Tobago	0	(s)	0	0	0	0	(s)	1	0	0	0	(s)	1	(s)
Turkey	0	(s)	0	0	0	0	(s)	4	0	0	0	25	29	1
United Arab Emirates	0	1	0	0	0	0	0	1	0	0	0	(s)	2	(s)
United Kingdom	0	1	(s)	0	(s)	0	(s)	28	(s)	36	(s)	1	68	2
U.S.S.R.	0	0	0	0	0	0	0	2	0	0	0	39	41	1
Uruguay	0	0	0	0	0	0	(s)	(s)	0	0	0	(s)	(s)	(s)
Venezuela	0	(s)	0	0	0	0	(s)	(s)	(s)	66	(s)	1	68	2
Virgin Islands	3,447	(s)	0	0	0	730	0	(s)	0	0	0	0	4,178	135
West Germany	0	0	0	0	(s)	0	0	3	(s)	84	(s)	4	92	3
Yugoslavia	0	0	0	0	0	0	0	(s)	0	0	0	0	(s)	(s)
Other	548	3	0	0	(s)	276	(s)	6	(s)	0	(s)	21	854	28
Total	4,336	987	51	24	1,701	4,732	47	483	34	4,713	8	738	17,853	576

<sup>1</sup> Exports of crude oil are prohibited by law. However, some crude oil is exchanged with

Canada on a barrel for barrel basis, and crude oil is shipped to U.S. Territories

(especially Puerto Rico and the Virgin Islands) to be refined there. The Statistical

Tracking Systems count these exchanges and shipments as imports and exports.

(s) Less than 500 barrels or less than 500 barrels per day.

Note: Total may not equal sum of components due to independent rounding.

Source: See Explanatory Notes on Data Collection and Estimation.

Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, October 1983  
(Thousand Barrels)

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		Rocky Mt.	West Coast
Crude Oil (incl. lease condensate)																	
Refinery .....	—	—	13,901	—	—	—	—	14,052	—	—	—	—	—	47,380	1,993	23,433	100,759
Tank Farms and Pipelines .....	—	—	1,313	—	—	—	—	58,608	—	—	—	—	—	100,237	9,545	31,972	201,675
Leases .....	—	—	56	—	—	—	—	1,631	—	—	—	—	—	17,323	1,351	1,671	22,032
Strategic Petroleum Reserve¹ .....	—	—	0	—	—	—	—	0	—	—	—	—	—	367,240	0	0	367,240
Alaskan In-Transit .....	—	—	0	—	—	—	—	0	—	—	—	—	—	0	0	0	0
Total .....	—	—	15,270	—	—	—	—	74,291	—	—	—	—	—	532,180	12,889	83,593	718,223
Total Stocks, All Oils (excl. Crude Oil)																	
Refinery .....	42,891	2,956	45,847	1,112	40,314	5,792	14,258	61,476	10,221	79,290	46,726	4,810	1,272	142,319	10,008	59,771	319,421
Bulk Terminal .....	—	—	134,656	—	—	—	—	95,977	—	—	—	—	—	96,521	2,625	24,324	354,103
Pipeline .....	—	—	28,677	—	—	—	—	34,307	—	—	—	—	—	36,686	2,526	4,068	108,264
Natural Gas Processing Plant .....	248	52	300	0	207	46	1,727	1,980	1,854	6,271	808	79	187	9,199	213	175	11,867
Total .....	—	—	209,480	—	—	—	—	193,740	—	—	—	—	—	286,725	15,372	88,338	793,655
Natural Gasoline and Isopentane																	
Refinery .....	17	0	17	0	63	55	131	249	138	241	222	1	15	617	11	20	914
Bulk Terminal .....	—	—	5	—	—	—	—	1,039	—	—	—	—	—	2,345	2	0	3,391
Pipeline .....	—	—	0	—	—	—	—	260	—	—	—	—	—	717	29	5	1,011
Natural Gas Processing Plant .....	4	6	10	0	21	9	170	200	315	232	192	27	31	797	41	21	1,069
Total .....	—	—	32	—	—	—	—	1,748	—	—	—	—	—	4,476	83	46	6,385
Unfractionated Stream																	
Bulk Terminal .....	—	—	0	—	—	—	—	2,533	—	—	—	—	—	1,828	0	0	4,361
Pipeline .....	—	—	0	—	—	—	—	107	—	—	—	—	—	2,411	466	0	2,984
Natural Gas Processing Plant .....	0	3	3	0	100	1	1,191	1,292	146	2,736	117	1	10	3,010	25	0	4,330
Total .....	—	—	3	—	—	—	—	3,932	—	—	—	—	—	7,249	491	0	11,675
Plant Condensate																	
Refinery .....	0	0	0	0	5	0	0	5	4	58	0	67	0	129	0	0	134
Bulk Terminal .....	—	—	0	—	—	—	—	0	—	—	—	—	—	3	0	0	3
Pipeline .....	—	—	0	—	—	—	—	0	—	—	—	—	—	200	0	0	200
Natural Gas Processing Plant .....	0	0	0	0	2	3	4	9	30	38	16	6	0	90	16	0	115
Total .....	—	—	0	—	—	—	—	14	—	—	—	—	—	422	16	0	452
Liquefied Petroleum Gases																	
Refinery .....	588	12	600	340	1,952	148	641	3,081	329	272	2,591	40	26	3,258	299	583	7,821
Bulk Terminal .....	—	—	2,278	—	—	—	—	28,118	—	—	—	—	—	61,262	113	2,817	94,586
Pipeline .....	—	—	2,994	—	—	—	—	5,663	—	—	—	—	—	3,551	36	0	12,244
Natural Gas Processing Plant .....	216	43	259	0	83	33	362	478	1,144	3,263	483	44	145	5,079	121	154	6,091
Total .....	—	—	6,131	—	—	—	—	37,340	—	—	—	—	—	73,150	569	3,554	120,744

See footnotes at end of table.

Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, October 1983  
(Thousand Barrels) (continued)

Commodity	PAD District I			PAD District II					PAD District III					PAD District IV			United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Daks.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.	Dist. IV		PAD Dist. V	
																		West	Coast
<b>Ethane</b>																			
Refinery .....	0	0	0	0	2	21	0	23	0	9	0	0	0	0	9	0	0	32	
Bulk Terminal .....	—	—	0	—	—	—	—	1,241	—	—	—	—	—	—	4,164	0	0	5,405	
Pipeline .....	—	—	0	—	—	—	—	892	—	—	—	—	—	—	299	0	0	1,191	
Natural Gas Processing Plant .....	0	0	0	0	22	0	13	35	3	464	0	0	4	471	1	0	0	507	
Total .....	—	—	0	—	—	—	—	2,191	—	—	—	—	—	—	4,943	1	0	7,135	
<b>Propane for Petrochemical Feedstock Use</b>																			
Refinery .....	21	0	21	0	82	0	0	82	3	7	7	0	0	17	0	0	0	120	
Total .....	—	—	21	—	—	—	—	82	—	—	—	—	—	17	0	0	0	120	
<b>Propane For Other Uses</b>																			
Refinery .....	526	5	531	2	1,300	30	229	1,561	68	57	933	5	0	1,063	137	101	3,393	48,733	
Bulk Terminal .....	—	—	1,886	—	—	—	—	17,618	—	—	—	—	—	28,459	112	656	0	6,865	
Pipeline .....	—	—	2,845	—	—	—	—	2,808	—	—	—	—	—	1,210	0	0	0	2,453	
Natural Gas Processing Plant .....	188	38	226	0	41	21	198	260	512	775	364	21	78	1,750	84	133	892	61,444	
Total .....	—	—	5,488	—	—	—	—	22,247	—	—	—	—	—	32,484	333	892	0	0	
<b>Butane For Petro. Feed Use</b>																			
Refinery .....	0	0	0	0	0	20	0	20	0	27	0	2	0	29	1	2	52	52	
Total .....	—	—	0	—	—	—	—	20	—	—	—	—	—	29	1	2	0	0	
<b>Butane For Other Uses</b>																			
Refinery .....	41	7	48	286	356	58	288	988	147	102	789	20	15	1,073	108	289	2,506	20,379	
Bulk Terminal .....	—	—	390	—	—	—	—	3,771	—	—	—	—	—	14,796	0	1,422	0	6,865	
Pipeline .....	—	—	133	—	—	—	—	969	—	—	—	—	—	635	1	0	0	1,738	
Natural Gas Processing Plant .....	27	3	30	0	14	10	41	65	343	1,224	78	17	29	1,691	35	13	1834	26,457	
Total .....	—	—	601	—	—	—	—	5,793	—	—	—	—	—	18,195	144	1,724	0	0	
<b>Butane-Propane Mixtures For Other Uses</b>																			
Refinery .....	0	0	0	0	2	0	0	2	1	8	3	0	5	17	2	147	168	11,133	
Bulk Terminal .....	—	—	0	—	—	—	—	381	—	—	—	—	—	11	0	606	998	1,368	
Pipeline .....	—	—	0	—	—	—	—	18	—	—	—	—	—	638	0	0	0	656	
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	5	6	0	1	0	12	0	5	17	1,839	
Total .....	—	—	0	—	—	—	—	401	—	—	—	—	—	678	2	758	0	0	
<b>Ethane-Propane Mixtures</b>																			
Refinery .....	—	—	0	—	—	—	—	3,316	—	—	—	—	—	7,817	0	0	11,133	13,668	
Bulk Terminal .....	—	—	0	—	—	—	—	644	—	—	—	—	—	689	35	0	0	1,368	
Pipeline .....	—	—	0	—	—	—	—	94	224	0	0	0	27	251	0	0	345	12,846	
Natural Gas Processing Plant .....	0	0	0	0	0	0	94	4,054	—	—	—	—	—	8,757	35	0	0	12,846	
Total .....	—	—	0	—	—	—	—	4,054	—	—	—	—	—	8,757	35	0	0	12,846	

See footnotes at end of table.



**Stocks of Crude Oil and Petroleum Products By PAD District, October 1983**  
**(Thousand Barrels) (continued)**

Commodity	PAD District I				PAD District II				PAD District III				PAD District IV		United States			
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total		Rocky Mt.	PAD Dist. V	
																	West	Coast
<b>Isobutane</b>																		
Refinery .....	0	0	0	52	210	19	124	405	110	62	859	13	6	1,050	51	44	1,550	
Bulk Terminal .....	—	—	2	—	—	—	—	1,791	—	—	—	—	—	6,015	1	131	7,940	
Pipeline .....	—	—	16	—	—	—	—	332	—	—	—	—	—	78	0	0	426	
Natural Gas Processing Plant .....	1	2	3	0	6	2	16	24	57	794	41	5	7	904	1	3	935	
Total .....	—	—	21	—	—	—	—	2,552	—	—	—	—	—	8,047	53	178	10,851	
<b>Other Hydrocarbons and Alcohol</b>																		
Refinery .....	125	0	125	0	136	0	0	136	1	88	28	0	0	117	0	5	383	
Total .....	—	—	125	—	—	—	—	136	—	—	—	—	—	117	0	5	383	
<b>Unfinished Oils</b>																		
Refinery .....																		
Naphthas and Lighter .....	3,490	220	3,710	50	2,903	163	1,180	4,286	767	7,795	5,295	157	99	14,113	492	4,770	27,381	
Kerosene and Lighter Gas Oils .....	1,945	90	2,035	0	2,390	4	695	3,089	599	7,560	1,327	30	6	9,522	604	3,775	19,025	
Heavy Gas Oils .....	7,347	183	7,530	136	4,895	456	1,259	6,746	1,039	10,873	6,443	205	109	18,669	1,476	9,860	44,281	
Residuum .....	2,150	289	2,439	1	2,983	11	1,159	4,154	365	5,344	3,048	45	0	8,802	583	5,455	21,433	
Total .....	14,932	782	15,714	187	13,171	634	4,293	18,285	2,770	31,572	16,113	437	214	51,106	3,155	23,860	112,120	
<b>Motor Gasoline Blending Components</b>																		
Refinery .....	4,510	88	4,598	46	5,107	755	1,323	7,231	1,728	9,942	6,368	136	155	18,329	1,621	7,600	39,379	
Bulk Terminal .....	—	—	56	—	—	—	—	271	—	—	—	—	—	572	1	157	1,057	
Pipeline .....	—	—	0	—	—	—	—	35	—	—	—	—	—	26	0	0	61	
Total .....	—	—	4,654	—	—	—	—	7,537	—	—	—	—	—	18,927	1,622	7,757	40,497	
<b>Aviation Gasoline Blending Components</b>																		
Refinery .....	12	0	12	0	67	0	43	110	0	8	167	0	0	175	0	26	323	
Total .....	—	—	12	—	—	—	—	110	—	—	—	—	—	175	0	26	323	
<b>Total Finished Motor Gasoline</b>																		
Refinery .....	5,344	267	5,611	104	5,471	1,250	3,151	9,976	2,180	8,914	5,179	791	203	17,267	1,913	6,754	41,521	
Bulk Terminal .....	—	—	37,270	—	—	—	—	32,054	—	—	—	—	—	12,674	1,533	10,489	94,020	
Pipeline .....	—	—	14,191	—	—	—	—	15,694	—	—	—	—	—	19,103	1,210	2,051	52,249	
Natural Gas Processing Plant .....	28	0	28	0	0	0	0	0	0	0	0	0	0	0	9	0	37	
Total .....	—	—	57,100	—	—	—	—	57,724	—	—	—	—	—	49,044	4,665	19,294	187,827	
<b>Finished Leaded Motor Gasoline</b>																		
Refinery .....	2,468	154	2,622	69	2,466	781	1,720	5,036	1,202	3,762	2,806	340	135	8,245	1,196	3,278	20,377	
Bulk Terminal .....	—	—	17,566	—	—	—	—	15,870	—	—	—	—	—	6,452	944	4,926	45,758	
Pipeline .....	—	—	8,265	—	—	—	—	8,007	—	—	—	—	—	9,718	772	855	27,617	
Natural Gas Processing Plant .....	14	0	14	0	0	0	0	0	0	0	0	0	0	0	6	0	20	
Total .....	—	—	28,467	—	—	—	—	28,913	—	—	—	—	—	24,415	2,918	9,059	93,772	

See footnotes at end of table.

Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, October 1983  
(Thousand Barrels) (continued)

Commodity	PAD District I			PAD District II						PAD District III				PAD District IV			United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky ML	Dist. IV		PAD Dist. V	
																		West Coast	Coast
Finished Unleaded Motor Gasoline																			
Refinery .....	2,876	113	2,989	35	3,005	469	1,431	4,940	978	5,152	2,373	451	68	9,022	717	3,476	21,144		
Bulk Terminal .....	—	—	19,704	—	—	—	—	16,184	—	—	—	—	—	6,222	589	5,563	48,262		
Pipeline .....	—	—	5,926	—	—	—	—	7,887	—	—	—	—	—	9,385	438	1,196	24,632		
Natural Gas Processing Plant .....	14	0	14	0	0	0	0	0	0	0	0	0	0	0	3	0	17		
Total .....	—	—	28,633	—	—	—	—	28,811	—	—	—	—	—	24,629	1,747	10,235	94,055		
Finished Aviation Gasoline																			
Refinery .....	42	0	42	0	116	0	15	131	107	364	176	0	0	647	37	220	1,077		
Bulk Terminal .....	—	—	389	—	—	—	—	327	—	—	—	—	—	100	23	316	1,155		
Pipeline .....	—	—	18	—	—	—	—	101	—	—	—	—	—	57	0	0	176		
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	33	0	0	0	0	33	0	0	33		
Total .....	—	—	449	—	—	—	—	559	—	—	—	—	—	837	60	536	2,441		
Naphtha-Type Jet Fuel																			
Refinery .....	303	38	341	0	492	79	202	773	205	469	203	193	183	1,253	236	776	3,379		
Bulk Terminal .....	—	—	101	—	—	—	—	768	—	—	—	—	—	186	18	535	1,608		
Pipeline .....	—	—	163	—	—	—	—	212	—	—	—	—	—	333	97	332	1,137		
Total .....	—	—	605	—	—	—	—	1,753	—	—	—	—	—	1,772	351	1,643	6,124		
Kerosene-Type Jet Fuel																			
Refinery .....	1,718	0	1,718	59	1,136	121	55	1,371	231	3,723	2,452	11	73	6,490	371	3,516	13,466		
Bulk Terminal .....	—	—	5,102	—	—	—	—	4,438	—	—	—	—	—	1,848	284	1,901	13,573		
Pipeline .....	—	—	3,239	—	—	—	—	2,195	—	—	—	—	—	3,966	111	718	10,229		
Total .....	—	—	10,059	—	—	—	—	8,004	—	—	—	—	—	12,304	766	6,135	37,268		
Kerosene																			
Refinery .....	366	87	453	0	666	62	278	1,006	54	961	804	32	87	1,938	7	434	3,838		
Bulk Terminal .....	—	—	3,433	—	—	—	—	1,209	—	—	—	—	—	829	20	47	5,538		
Pipeline .....	—	—	302	—	—	—	—	175	—	—	—	—	—	351	0	0	828		
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	2	0	0	0	1	3	0	0	3		
Total .....	—	—	4,188	—	—	—	—	2,390	—	—	—	—	—	3,121	27	481	10,207		
Distillate Fuel Oils																			
Refinery .....	7,568	422	7,990	96	6,791	1,559	3,012	11,458	1,190	10,306	5,094	1,326	163	18,079	1,441	4,584	43,552		
Bulk Terminal .....	—	—	58,854	—	—	—	—	19,552	—	—	—	—	—	8,766	614	5,122	92,908		
Pipeline .....	—	—	7,770	—	—	—	—	9,761	—	—	—	—	—	7,762	577	954	26,824		
Natural Gas Processing Plant .....	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1		
Total .....	—	—	74,614	—	—	—	—	40,771	—	—	—	—	—	34,608	2,632	10,660	163,285		
Residual Fuel Oils																			
Refinery .....	3,219	102	3,321	19	1,705	198	103	2,025	379	4,558	3,041	150	31	8,159	452	6,180	20,137		
Bulk Terminal .....	—	—	21,975	—	—	—	—	1,794	—	—	—	—	—	5,409	0	2,096	31,274		
Pipeline .....	—	—	0	—	—	—	—	0	—	—	—	—	—	1	0	8	9		
Total .....	—	—	25,296	—	—	—	—	3,819	—	—	—	—	—	13,569	452	8,284	51,420		

See footnotes at end of table.

Table 20. Stocks of Crude Oil and Petroleum Products By PAD District, October 1983  
(Thousand Barrels) (continued)

Commodity	PAD District I			PAD District II					PAD District III					PAD District IV		United States	
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Dak.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La. Gulf Coast	No. La., Ark.	New Mexico	Total	Rocky Mt.		Dist. V West Coast
<b>Naphtha &lt; 400 Deg. Petro. Feedstock</b>																	
Refinery	35	0	35	0	142	0	48	190	68	978	379	86	0	1,511	0	176	1,912
Total	35	0	35	0	142	0	48	190	68	978	379	86	0	1,511	0	176	1,912
<b>Other Oils &gt; 400 Deg. Petro. Feedstock</b>																	
Refinery	4	0	4	0	23	0	0	23	316	1,097	134	0	0	1,547	5	347	1,926
Total	4	0	4	0	23	0	0	23	316	1,097	134	0	0	1,547	5	347	1,926
<b>Special Naphthas</b>																	
Refinery	26	55	81	0	209	0	180	389	21	1,297	88	145	0	1,551	8	243	2,272
Bulk Terminal	—	—	762	—	—	—	—	273	—	—	—	—	—	25	0	44	1,104
Natural Gas Processing Plant	0	0	0	0	0	0	0	0	108	0	0	0	0	108	0	0	108
Total	—	—	843	—	—	—	—	662	—	—	—	—	—	1,664	8	287	3,484
<b>Lubricants</b>																	
Refinery	967	884	1,851	0	674	0	263	937	25	2,799	920	490	0	4,234	51	582	7,655
Bulk Terminal	—	—	1,062	—	—	—	—	1,044	—	—	—	—	—	229	2	644	2,981
Total	—	—	2,913	—	—	—	—	1,981	—	—	—	—	—	4,463	53	1,226	10,636
<b>Waxes</b>																	
Refinery	17	142	159	0	38	0	39	77	20	238	116	82	0	456	0	53	745
Total	—	—	159	—	—	—	—	77	—	—	—	—	—	456	0	53	745
<b>Petroleum Coke</b>																	
Refinery	1,092	0	1,092	0	539	42	86	667	0	400	946	163	0	1,509	133	2,149	5,550
Total	1,092	0	1,092	0	539	42	86	667	0	400	946	163	0	1,509	133	2,149	5,550
<b>Asphalt and Road Oil</b>																	
Refinery	1,769	42	1,811	260	1,760	884	382	3,286	425	559	1,456	595	122	3,157	264	1,456	9,974
Bulk Terminal	—	—	3,308	—	—	—	—	2,518	—	—	—	—	—	417	15	118	6,376
Total	—	—	5,119	—	—	—	—	5,804	—	—	—	—	—	3,574	279	1,574	16,350
<b>Miscellaneous Products</b>																	
Refinery	237	35	272	1	51	5	13	70	30	446	249	65	0	790	4	207	1,343
Bulk Terminal	—	—	61	—	—	—	—	39	—	—	—	—	—	28	0	38	166
Pipeline	—	—	0	—	—	—	—	104	—	—	—	—	—	208	0	0	312
Natural Gas Processing Plant	0	0	0	0	1	0	0	1	75	2	0	1	0	78	1	0	80
Total	—	—	333	—	—	—	—	214	—	—	—	—	—	1,104	5	245	1,901
<b>Total Stocks, All Oils</b>																	
	—	—	224,750	—	—	—	—	268,031	—	—	—	—	—	818,905	28,261	171,931	1,511,878

1 Includes 33,879 thousand barrels of domestic crude oil

<sup>1</sup> Includes 33,879 thousand barrels of domestic crude oil.

Sources: See Explanatory Notes on Data Collection and Estimation.

— Not Applicable.

Table 21. Movements of Crude Oil and Petroleum Products by Pipeline, Tanker, and Barge Between PAD Districts, October 1983  
(Thousand Barrels)

Commodity	From I to			From II to			From III to			From IV to			From V to					
	II	III	V	I	III	IV	V	I	II	IV	V	II	III	V	I	II	III	IV
Crude Oil (Tanker and Barge only)	0	0	0	0	0	0	0	406	1,793	0	0	0	0	0	3,879	0	14,560	0
Petroleum Products	8,450	152	0	3,969	5,543	2,361	347	85,757	29,685	0	1,270	1,753	585	517	0	0	6	0
Natural Gasoline and Isopentane	0	0	0	0	128	0	0	0	334	0	0	5	0	0	0	0	0	0
Unfractionated Stream	0	0	0	0	512	0	0	0	1,243	0	0	582	585	0	0	0	0	0
Plant Condensate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquefied Petroleum Gases	0	0	0	592	2,212	160	0	1,919	5,123	0	0	282	0	0	0	0	0	0
Unfinished Oils	21	0	0	0	0	0	288	253	0	0	0	0	0	0	0	0	0	0
Motor Gasoline Blending Components	0	0	0	0	0	0	0	0	1,091	0	0	0	0	0	0	0	0	0
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline	5,651	0	0	1,402	1,745	1,542	59	46,655	11,971	0	581	449	0	358	0	0	0	0
Finished Leaded Motor Gasoline	3,051	0	0	502	985	865	0	18,004	5,890	0	324	279	0	289	0	0	0	0
Finished Unleaded Motor Gasoline	2,600	0	0	900	760	677	59	28,651	6,081	0	257	170	0	69	0	0	0	0
Finished Aviation Gasoline	0	0	0	0	0	17	0	161	245	0	0	0	0	0	0	0	0	0
Naphtha-Type Jet Fuel	121	0	0	0	65	0	0	434	57	0	88	87	0	28	0	0	0	0
Kerosene-Type Jet Fuel	402	0	0	183	103	409	0	9,782	1,603	0	90	6	0	32	0	0	0	0
Kerosene	38	0	0	0	0	0	0	845	0	0	0	0	0	0	0	0	0	0
Distillate Fuel Oil	2,134	3	0	1,256	659	233	0	16,921	6,469	0	364	342	0	99	0	0	0	0
Residual Fuel Oil	0	4	0	201	0	0	0	7,525	136	0	0	0	0	0	0	0	0	0
Napthna and Other Oils for Petro. Feedstock	27	0	0	31	0	0	0	21	30	0	0	0	0	0	0	0	0	0
Special Napthas	0	0	0	0	0	0	0	229	163	0	0	0	0	0	0	0	0	0
Lubricants	0	100	0	45	9	0	0	667	464	0	147	0	0	0	0	0	6	0
Waxes	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0
Asphalt and Road Oil	0	0	0	87	0	0	0	232	688	0	0	0	0	0	0	0	0	0
Miscellaneous Products	56	45	0	172	110	0	0	103	48	0	0	0	0	0	0	0	0	0
Total All Products	8,450	152	0	3,969	5,543	2,361	347	86,163	31,458	0	1,270	1,753	585	517	3,879	0	14,566	0

Sources: See Explanatory Notes on Data Collection and Estimation.

Table 22. Movements of Petroleum Products by Pipeline between PAD Districts, October 1983  
(Thousand Barrels)

Commodity	From I to			From II to			From III to			From IV to			From V to		
	II	III	I	I	III	IV	I	II	IV	V	II	III	V	III	IV
Natural Gasoline and Isopentane .....	0	0	0	0	128	0	0	334	0	0	5	0	0	0	0
Unfractionated Stream .....	0	0	0	0	512	0	0	1,243	0	0	562	585	0	0	0
Plant Condensate .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquefied Petroleum Gases .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Motor Gasoline Blending Components .....	0	0	592	1,712	2,212	160	0	5,123	0	0	282	0	0	0	0
Aviation Gasoline Blending Components .....	0	0	0	0	0	0	0	1,091	0	0	0	0	0	0	0
Finished Motor Gasoline .....	4,217	0	1,209	34,945	1,727	1,542	0	11,215	0	581	449	0	358	0	0
Finished Leaded Motor Gasoline .....	2,291	0	424	13,362	972	865	0	5,515	0	324	279	0	289	0	0
Finished Unleaded Motor Gasoline .....	1,926	0	785	21,583	755	677	0	5,700	0	257	170	0	69	0	0
Finished Aviation Gasoline .....	0	0	0	17	0	0	0	221	0	0	0	0	0	0	0
Naphtha-Type Jet Fuel .....	169	0	0	394	65	0	0	57	0	88	67	0	28	0	0
Kerosene-Type Jet Fuel .....	30	0	171	7,241	103	409	0	1,535	0	90	6	0	32	0	0
Kerosene .....	1,501	0	280	610	659	0	0	0	0	0	342	0	99	0	0
Distillate Fuel Oil .....	0	0	0	0	0	233	0	6,120	0	364	0	0	0	0	0
Residual Fuel Oil .....	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous Products .....	0	0	134	0	0	0	0	0	0	0	0	0	0	0	0
Total .....	5,917	0	2,386	59,175	5,406	2,361	0	26,939	0	1,123	1,753	585	517	0	0

Source: See Explanatory Notes on Data Collection and Estimation.

Table 23. Movements of Crude Oil and Petroleum Products by Tanker and Barge Between PAD Districts, October 1983  
(Thousand Barrels)

Commodity	From I to			From II to			From III to				From V to				
	II	III	V	I	III	V	I	New Eng	Cent Atl	Low Atl	II	V	I	II	III
Crude Oil	0	0	0	0	0	0	406	0	406	0	1,793	0	3,879	0	14,560
Petroleum Products	2,533	152	0	1,583	137	347	26,582	1,138	3,104	22,340	2,726	147	0	0	6
Liquefied Petroleum Gases	0	0	0	0	0	0	207	0	0	207	0	0	0	0	0
Unfinished Oils	21	0	0	0	0	288	253	0	253	0	0	0	0	0	0
Motor Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline	1,434	0	0	193	18	59	11,710	0	1,002	10,708	756	0	0	0	0
Finished Aviation Gasoline	0	0	0	0	0	0	142	0	44	98	24	0	0	0	0
Naphtha-Type Jet Fuel	121	0	0	0	0	0	40	0	0	40	0	0	0	0	0
Kerosene-Type Jet Fuel	233	0	0	12	0	0	2,541	0	929	1,612	68	0	0	0	0
Kerosene	8	0	0	0	0	0	235	86	34	115	0	0	0	0	0
Distillate Fuel Oil	633	3	0	976	0	0	2,667	500	103	2,064	349	0	0	0	0
Residual Fuel Oil	0	4	0	201	0	0	7,525	504	69	6,952	136	0	0	0	0
Naphtha and Other Oils for Petro. Feed. Use	27	0	0	31	0	0	21	0	8	13	30	0	0	0	0
Special Naphthas	0	0	0	0	0	0	229	36	138	55	163	0	0	0	0
Lubricants	0	100	0	45	9	0	667	0	446	221	464	147	0	0	6
Waxes	0	0	0	0	0	0	10	0	10	0	0	0	0	0	0
Asphalt and Road Oil	0	0	0	87	0	0	232	0	15	217	688	0	0	0	0
Miscellaneous Products	56	45	0	38	110	0	103	12	53	38	48	0	0	0	0
Total	2,533	152	0	1,583	137	347	26,888	1,138	3,510	22,340	4,519	147	3,879	0	14,500

Table 24. Net Movements of Crude Oil and Petroleum Products by Pipeline, Tanker and Barge Between PAD Districts, October 1983  
(Thousand Barrels)

Commodity	PAD District I			PAD District II			PAD District III			PAD District IV			PAD District V		
	Receipts into PADD I	Shipments from PADD I	Net Receipts PADD I	Receipts into PADD II	Shipments from PADD II	Net Receipts PADD II	Receipts into PADD III	Shipments from PADD III	Net Receipts PADD III	Receipts into PADD IV	Shipments from PADD IV	Net Receipts PADD IV	Receipts into PADD V	Shipments from PADD V	Net Receipts PADD V
<b>Crude Oil (Tanker and Barge only)</b>	4,285	0	4,285	1,793	0	1,793	14,560	2,199	12,361	0	0	0	0	18,439	-18,439
<b>Petroleum Products</b>	89,726	8,602	81,124	39,868	12,220	27,648	6,286	116,692	-110,406	2,361	2,855	-494	2,134	6	2,128
Natural Gasoline	0	0	0	339	128	211	128	334	-206	0	5	-5	0	0	0
Unfractionated Stream	0	0	0	1,825	512	1,313	1,097	1,243	-146	0	1,167	-1,167	0	0	0
Plant Condensate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquefied Petroleum Gases	2,511	0	2,511	5,405	2,964	2,441	2,212	7,042	-4,830	160	282	-122	0	0	0
Unfinished Oils	253	21	232	21	288	-267	0	253	-253	0	0	0	288	0	288
Motor Gasoline Blending Components	0	0	0	1,091	0	1,091	0	1,091	-1,091	0	0	0	0	0	0
Aviation Gasoline Blending Components	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Finished Motor Gasoline	48,057	5,651	42,406	18,071	4,748	13,323	1,745	59,207	-57,462	1,542	807	735	998	0	998
Finished Leaded Motor Gasoline	18,506	3,051	15,455	9,220	2,352	6,868	985	24,218	-23,233	865	568	297	613	0	613
Finished Unleaded Motor Gasoline	29,551	2,600	26,951	8,851	2,396	6,455	760	34,989	-34,229	677	239	438	385	0	385
Finished Aviation Gasoline	161	0	161	245	17	228	0	406	-406	17	0	17	0	0	0
Naphtha-Type Jet Fuel	434	121	313	265	65	200	65	579	-514	0	115	-115	116	0	116
Kerosene-Type Jet Fuel	9,965	402	9,563	2,011	695	1,316	103	11,475	-11,372	409	38	371	122	0	122
Kerosene	845	38	807	38	0	38	0	845	-845	0	0	0	0	0	0
Distillate Fuel Oil	18,177	2,137	16,040	8,945	2,148	6,797	562	23,754	-23,092	233	441	-208	463	0	463
Residual Fuel Oil	7,726	4	7,722	136	201	-65	4	7,661	-7,657	0	0	0	0	0	0
Naphtha and Other Oils for Petro.															
Feedstock Use	52	27	25	57	31	26	0	51	-51	0	0	0	0	0	0
Special Naphthas	229	0	229	163	0	163	0	392	-392	0	0	0	0	0	0
Lubricants	712	100	612	464	54	410	115	1,278	-1,163	0	0	0	147	6	141
Waxes	10	0	10	0	0	0	0	10	-10	0	0	0	0	0	0
Asphalt and Road Oil	319	0	319	688	87	601	0	920	-920	0	0	0	0	0	0
Miscellaneous Products	275	101	174	104	282	-178	155	151	4	0	0	0	0	0	0
<b>Total All Products</b>	94,011	8,602	85,409	41,861	12,220	29,441	20,846	118,991	-98,045	2,361	2,855	-494	2,134	18,445	-16,311

Sources: See Explanatory Notes on Data Collection and Estimation.

**Table 25. Production of Residual Fuel Oil By Sulfur Content, October 1983  
(Thousand Barrels)**

Commodity	PAD District I		PAD District II					PAD District III					PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Daks.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La., Gulf Coast	No. La., Ark.	New Mexico	Total		PAD Dist. V West Coast	
Residual Fuel Oil	2,302	121	2,423	75	1,494	254	183	2,005	563	6,578	3,416	260	36	10,953	298	9,089	24,769
0.00 to 0.30% Sulfur	374	42	416	0	93	0	25	118	49	317	280	66	7	719	46	1,005	2,304
0.31 to 1.00% Sulfur	1,730	0	1,730	0	384	0	52	436	405	1,696	1,315	140	0	3,556	107	2,441	8,270
Greater Than 1.00% Sulfur	198	79	277	75	1,017	254	106	1,452	109	4,665	1,821	54	29	6,678	145	5,643	14,195

Source: See Explanatory Notes on Data Collection and Estimation.

**Source:** See Explanatory Notes on Data Collection and Estimation.

**Table 26. Stocks of Residual Fuel Oil By Sulfur Content, October 1983  
(Thousand Barrels)**

Commodity	PAD District I			PAD District II					PAD District III				PAD District IV		United States		
	East Coast	Appalachian #1	Total	Appalachian #2	Ind., Ill., Ky.	Minn., Wisc., Daks.	Okla., Kans., Mo.	Total	Texas Inland	Texas Gulf Coast	La., Gulf Coast	No. La., Ark.	New Mexico	Total		PAD Dist. IV Rocky Mtn.	PAD Dist. V West Coast
<b>Residual Fuel Oil -- 0.00 to 0.30% Sulfur</b>																	
Refinery .....	415	37	452	0	158	0	21	179	35	99	144	21	3	302	136	548	1,617
Bulk Terminal .....	—	—	4,694	—	—	—	—	259	—	—	—	—	—	67	0	24	5,044
Total .....	—	—	5,146	—	—	—	—	438	—	—	—	—	—	369	136	572	6,661
<b>Residual Fuel Oil -- 0.31 to 1.00% Sulfur</b>																	
Refinery .....	1,983	3	1,986	17	511	0	49	577	248	1,229	1,304	68	0	2,849	80	1,981	7,473
Bulk Terminal .....	—	—	6,855	—	—	—	—	714	—	—	—	—	—	2,984	0	665	11,218
Total .....	—	—	8,841	—	—	—	—	1,291	—	—	—	—	—	5,833	80	2,646	18,691
<b>Residual Fuel Oil -- Greater than 1.00% Sulfur</b>																	
Refinery .....	821	62	883	2	1,036	198	33	1,269	96	3,230	1,593	61	28	5,008	236	3,651	11,047
Bulk Terminal .....	—	—	10,426	—	—	—	—	821	—	—	—	—	—	2,358	0	1,407	15,012
Total .....	—	—	11,309	—	—	—	—	2,090	—	—	—	—	—	7,366	236	5,058	26,059

Sources: See Explanatory Notes on Data Collection and Estimation

Sources: See Explanatory Notes on Data Collection and Estimation.  
 --- Not Applicable

**Table 27. Movements of Residual Fuel Oil by Tanker and Barge Between PAD Districts, By Sulfur Content, October 1983 (Thousand Barrels)**

Commodity	From I to			From II to			From III to					From V to		
	II	III	V	I	III	V	I	Cent Adj	Low Adj	II	V	I	II	III
<b>Residual Fuel Oil</b>	0	4	0	201	0	0	7,525	504	69	6,952	136	0	0	0
0.00 to 0.30% Sulfur	0	0	0	0	0	0	0	0	0	0	96	0	0	0
0.31 to 1.00% Sulfur	0	0	0	21	0	0	5,822	219	0	5,603	0	0	0	0
Greater Than 1.00% Sulfur	0	4	0	180	0	0	1,703	285	69	1,349	40	0	0	0

Source: See Explanatory Notes on Data Collection and Estimation.

Source: See Explanatory Notes on Data Collection and Estimation.

**Table 28. Imports of Residual Fuel Oil by Sulfur Content by Country of Origin, October 1983**  
(Thousand Barrels)

Country	Residual Fuel Oil			
	0.00 to 0.30%	0.31 to 1.00%	Greater Than 1.00%	Total
<b>Arab OPEC</b>				
Algeria .....	775	312	0	1,088
Iraq .....	0	0	0	0
Kuwait .....	0	0	0	0
Libya .....	0	0	0	0
Qatar .....	0	0	0	0
Saudi Arabia .....	0	0	582	582
United Arab Emirates .....	0	0	0	0
Subtotal Arab OPEC .....	775	312	582	1,669
<b>Other OPEC</b>				
Ecuador .....	0	0	0	0
Gabon .....	0	0	0	0
Indonesia .....	434	127	0	561
Iran .....	0	0	0	0
Nigeria .....	19	0	0	19
Venezuela .....	111	232	1,563	1,906
Subtotal Other OPEC .....	564	359	1,563	2,486
<b>Other</b>				
Angola .....	0	318	0	318
Australia .....	0	0	0	0
Bahamas .....	544	44	1,065	1,652
Bolivia .....	0	0	0	0
Brazil .....	0	0	0	0
Brunei .....	0	0	0	0
Canada .....	247	278	198	723
Congo .....	0	174	0	174
Egypt .....	0	0	0	0
France .....	0	0	0	0
Ghana .....	0	0	0	0
Liberia .....	0	0	0	0
Malaysia .....	0	37	0	37
Mexico .....	(s)	0	967	967
Netherlands .....	341	0	0	341
Netherlands Antilles .....	0	258	3,290	3,548
Norway .....	0	0	0	0
Oman .....	0	0	0	0
People's Republic of China .....	0	0	0	0
Peru .....	0	0	237	237
Puerto Rico .....	0	0	0	0
Romania .....	0	0	0	0
Spain .....	0	0	0	0
Syria .....	0	0	0	0
Trinidad .....	0	0	313	313
Tunisia .....	0	0	0	0
United Kingdom .....	0	183	0	183
Virgin Islands .....	1,370	2,243	1,281	4,893
Yugoslavia .....	0	0	0	0
Zaire .....	0	0	0	0
Other Western Hemisphere .....	1,167	0	0	1,167
Other Eastern Hemisphere .....	314	492	130	936
Subtotal Other .....	3,984	4,026	7,480	15,490
<b>Total Imports .....</b>	<b>5,324</b>	<b>4,697</b>	<b>9,624</b>	<b>19,645</b>

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.



Table 29. Imports of Residual Fuel Oil by Sulfur Content by State of Entry, October 1983  
(Thousand Barrels)

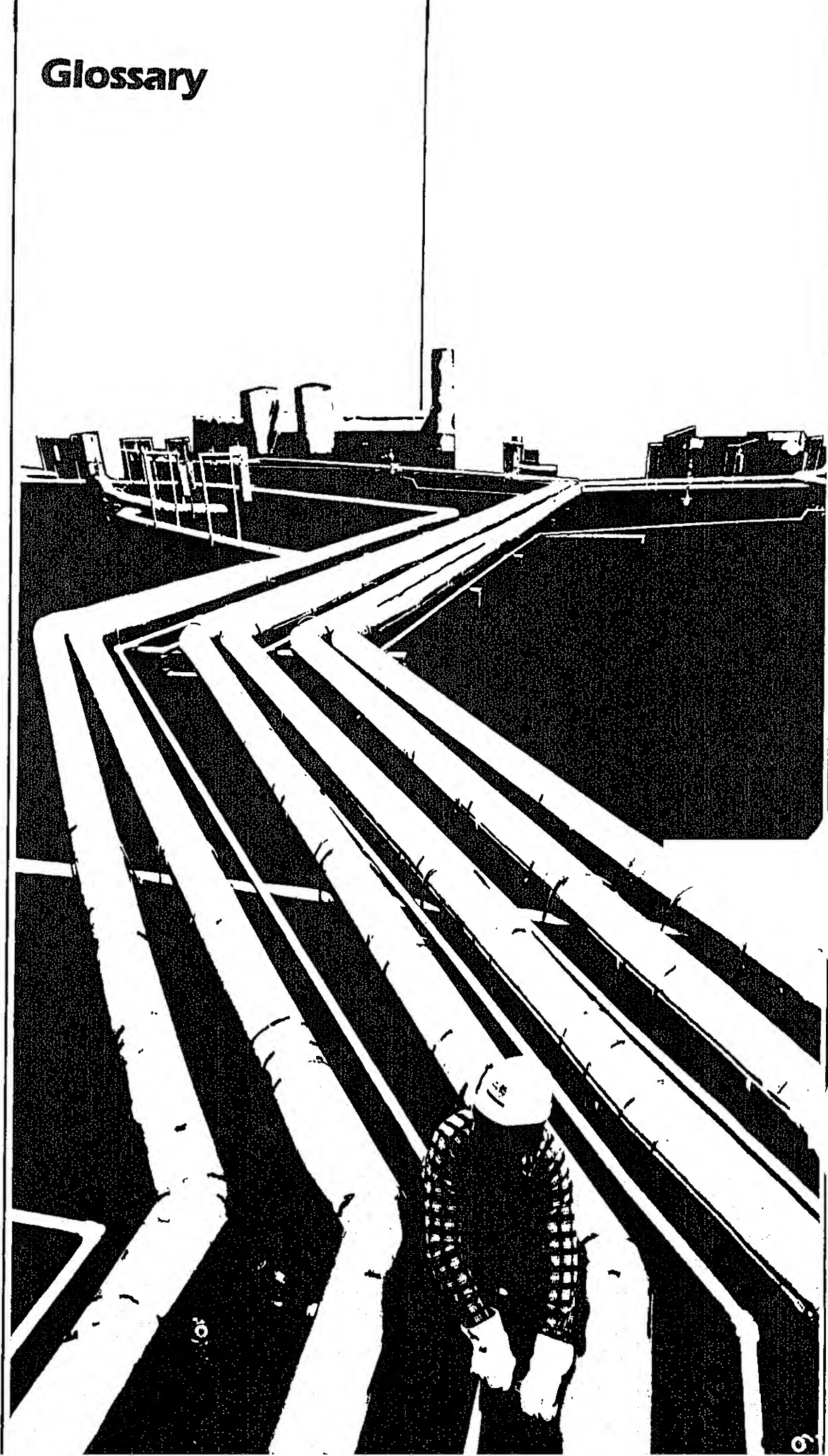
State	Residual Fuel Oil				Total
	0.00 to 0.30%	0.31 to 1.00%	Greater Than 1.00%		
<b>PAD District I</b>					
Connecticut	4,458	3,986	8,856		17,100
Delaware	264	0	0		264
Florida	0	0	127		127
Maine	0	345	650		995
Maryland	(s)	0	389		389
Massachusetts	99	100	319		518
New Jersey	105	0	1,451		1,557
New York	481	459	1,454		2,393
Pennsylvania	3,500	2,191	2,719		8,409
South Carolina	0	568	425		993
Vermont	0	0	338		338
Virginia	8	0	0		8
	0	324	784		1,108
<b>PAD District II</b>					
Illinois	216	44	37		298
Michigan	0	44	0		44
Minnesota	168	0	0		168
North Dakota	0	0	3		3
Wisconsin	3	0	34		37
	44	0	0		44
<b>PAD District III</b>					
Texas	628	232	584		1,444
	628	232	584		1,444
<b>PAD District IV</b>					
Montana	21	0	18		39
	21	0	18		39
<b>PAD District V</b>					
California	(s)	435	329		765
Hawaii	(s)	0	199		199
	0	435	130		566
<b>All PAD Districts</b>	5,324	4,697	9,624		19,645

(s) Less than 500 barrels.

Note: Total may not equal sum of components due to independent rounding.

Sources: See Explanatory Notes on Data Collection and Estimation.

**Glossary**





# Definitions of Petroleum Products and Other Terms

**Alcohol.** The family name of a group of organic chemical compounds composed of carbon, hydrogen, and oxygen. The series of molecules vary in chain length and are composed of a hydrocarbon plus a hydroxyl group;  $\text{CH}-(\text{CH})_n-\text{OH}$ . *Alcohol* includes methanol and ethanol.

**Alkylation.** A refinery process for chemically combining isoparaffin with olefin hydrocarbons. The product, alkylate, has high octane value and is blended with motor and aviation gasoline to improve the antiknock value of the fuel.

**API Gravity.** An arbitrary scale expressing the gravity or density of liquid petroleum products. The measuring scale is calibrated in terms of degrees API; it may be calculated in terms of the following formula:

$$\text{Deg API} = \frac{141.5}{\text{sp gr } 60^\circ\text{F}/60^\circ\text{F}} - 131.5$$

**Aromatics.** Hydrocarbons characterized by unsaturated ring structures of carbon atoms. Commercial petroleum aromatics are benzene, toluene, and xylene.

**Asphalt.** A dark-brown-to-black cement-like material, containing bitumens as the predominant constituents, obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products: cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalts. The conversion factor for asphalt is 5.5 barrels of 42 U.S. gallons per short-ton.

**ASTM.** The acronym for the American Society for Testing and Materials.

**Aviation Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished aviation gasoline.

**Aviation Gasoline, Finished.** All special grades of gasoline for use in aviation reciprocating engines, as given in ASTM Specification D910 and Military Specification MIL-G-5572. Excludes blending components which will be used in blending or compounding into finished aviation gasoline.

**Barrel.** A volumetric unit of measure for crude oil and petroleum products equivalent to 42 U.S. gallons. This measure is used in most statistical reports. Factors for converting petroleum coke, asphalt and wax to barrels are given in the definitions for these products.

**Barrels per Calendar Day.** The maximum number of barrels of input that can be processed in a twenty-four hour period after making allowances for the following limitations: downstream limitations, environmental constraints, types and grades of inputs, planned and unplanned downtime, and types and grades of products.

**Barrels Per Stream Day.** The amount a unit can process running at full capacity under optimal crude and product slate conditions.

**Bi-metallic.** A term used to describe a type of catalyst. A catalytic process utilizing a catalyst comprised of two metals (e.g., platinum, rhodium).

**Butane.** A normally gaseous paraffinic hydrocarbon,  $\text{C}_4\text{H}_{10}$ . It is extracted from natural gas or refinery gas streams. Butane is covered by ASTM Specification D1835 and Gas Processors Association Specification for commercial butane.

**Isobutane.** A saturated straight-chain hydrocarbon of butane. It is a colorless paraffinic gas that boils at a temperature of 10.9 degrees F. This classification includes mixtures of gases that contain 80 percent liquid volume or more isobutane. It is extracted from natural gas and refinery gas streams.

**Normal Butane.** A saturated straight-chain hydrocarbon of butane. It is a colorless paraffinic gas that boils at a temperature of 31.1 degrees F. This classification includes mixtures of gases that contain 80 percent or more normal butane.

**Other Butanes.** All butanes not included as normal butane or isobutane.

**Butane-Propane Mixtures.** Mixtures consisting exclusively of butane and propane that conform to ASTM Specification D1835 and Gas Processors Association Specification for commercial butane-propane mixtures. They are extracted from natural gas and refinery gas streams.

**Butylene.** An olefinic hydrocarbon,  $\text{C}_4\text{H}_8$ , recovered from refinery processes.

**Catalytic Cracking.** The refining process of breaking down the larger, heavier, and more complex hydrocarbon molecules into simpler and lighter molecules. Catalytic cracking is accomplished by the use of a catalytic agent and is an effective process for increasing the yield of gasoline from crude oil.

**Catalytic Hydrocracking.** A refining process for converting middle boiling or residual material to high-octane gasoline, reformer charge stock, jet fuel and/or high grade fuel oil. Hydrocracking is an efficient, relatively low temperature process using hydrogen and a catalyst.

**Catalytic Hydrotreating.** A process for treating petroleum fractions (e.g., distillate fuel oil and residual fuel oil) and unfinished oils (e.g., naphthas, reformer feeds and heavy gas oil) in the presence of catalysts and substantial quantities of hydrogen to upgrade their quality.

**Catalytic Reforming.** The use of controlled heat and pressure with catalysts to effect the rearrangement of certain hydrocarbon molecules without altering their composition appreciably; the conversion of low-octane

gasoline fractions into higher octane stocks suitable for blending into finished gasoline; also the conversion of naphthas to obtain a more volatile product of higher octane number.

**Conventional.** A term used to describe a type of catalyst. A catalytic process utilizing a catalyst comprised of a metal and a non-metal (e.g., platinum, alumina).

**Coal.** A generic term applied to carbonaceous rocks that were formed by the partial or complete decomposition of vegetation. These stratified carbonaceous rocks are either solid or brittle and are highly combustible. Includes lignite, bituminous coal, and anthracite coal which conform to ASTM Specification D388.

**Crude Distillation.** The refining process of separating crude oil components by heating and subsequent condensing of the fractions by cooling.

**Crude Oil (Including Lease Condensate).** A mixture of hydrocarbons that existed in liquid phase in underground reservoirs and remains liquid at atmospheric pressure after passing through surface separating facilities. Included are lease condensate and liquid hydrocarbons produced from tar sands, gilsonite and oil shale. Drip gas is also included, but topped crude oil (residual oil) and other unfinished oils are excluded. Liquids produced at natural gas processing plants and mixed with crude oil are likewise excluded where identifiable. Crude oil is considered as either domestic or foreign according to the following:

**Domestic.** Crude oil produced in the United States or from its outer continental shelf as defined in 43 U.S.C. 1331.

**Foreign.** Crude oil produced outside the United States.

**Delayed Coking.** A process to produce low Conradson carbon gas for catalytic cracking feedstock and for gasoline.

**Distillate Fuel Oil.** A general classification for one of the petroleum fractions produced in conventional distillation operations. It is used primarily for space heating, on-and-off-highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation. Included are products known as No. 1, No. 2, and No. 4 fuel oils; No. 1, No. 2, and No. 4 diesel fuel.

**No. 1 Fuel Oil.** A light distillate fuel oil intended for use in vaporizing pot-type burners. ASTM Specification D396 specifies for this grade maximum distillation temperatures of 420 degrees F. at the 10-percent point and 550 degrees F. at the 90-percent point, and kinematic viscosities between 1.4 and 2.2 centistokes at 100 degrees F.

**No. 2 Fuel Oil.** A distillate fuel oil for use in atomizing-type burners for domestic heating or for moderate capacity commercial-industrial burner units. ASTM

Specification D396 specifies for this grade distillation temperatures at the 90-percent point between 540 degrees and 640 degrees F., and kinematic viscosities between 2.0 and 3.6 centistokes at 100 degrees F.

**No. 1 and No. 2 Diesel Fuel Oils.** Distillate fuel oils used in compression-ignition engines, as given by ASTM Specification D975:

**No. 1-D.** A volatile distillate fuel oil with a boiling range between 300-575 degrees F. and used in high-speed diesel engines generally operated under wide variations in speed and load. Includes type C-B diesel fuel used for city buses and similar operations. Properties are defined in ASTM Specifications D975.

**No. 2-D.** A gas oil type distillate of lower volatility with distillation temperatures at the 90-percent point between 540-640 degrees F. for use in high-speed diesel engines generally operated under uniform speed and load conditions. Includes Type R-R diesel fuel used for railroad locomotive engines, and Type T-T for diesel-engine trucks. Properties are defined in ASTM Specification D975.

**No. 4 Fuel Oil.** A fuel oil for commercial burner installations not equipped with preheating facilities. It is used extensively in industrial plants. This grade is a blend of distillate fuel oil and residual fuel oil stocks that conforms to ASTM Specification D396 or Federal Specification VV-F-815C; its kinematic viscosity is between 5.8 and 26.4 centistokes at 100 degrees F. Also included is No. 4-D, a fuel oil for low- and medium-speed diesel engines that conforms to ASTM Specification D975.

**Eastern Hemisphere.** That half of the earth east of the Atlantic Ocean which includes Europe, Asia, Africa, and Australia. The Hawaiian Foreign Trade Zone is in this hemisphere.

**Electric Energy (Purchased).** Electricity purchased for refinery operations that is not produced within the refinery complex.

**Ethane.** A normally gaseous paraffinic compound (C<sub>2</sub>H<sub>6</sub>) extracted from natural gas and refinery gas streams. "Ethane" includes any products containing 90 percent liquid volume or more ethane.

**Ethane-Propane Mixtures.** Mixtures of ethane and propane in which neither component is 90 percent or more of the liquid volume. It is extracted from natural gas and refinery gas streams.

**Ethylene.** An olefinic hydrocarbon, (C<sub>2</sub>H<sub>4</sub>) recovered from refinery or petrochemical processes.

**Field Production.** Represents crude oil production on leases, natural gas liquids production at natural gas processing plants, and new supply of other hydrocarbons and alcohol.

**Fluid Coking.** A thermal process utilizing the fluidized-solids technique for continuous conversion of heavy, low-grade oils into lighter products.

**Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished aviation or motor gasoline.

**Gas Oil.** A liquid petroleum distillate having a viscosity intermediate between that of kerosene and lubricating oil. Derives its name from having originally been used in the manufacture of illuminating gas. Now supplies distillate-type fuel oils and diesel fuel, also cracked to produce gasoline.

**Imported Crude Oil Burned as Fuel.** The amount of foreign crude oil burned as a fuel oil, usually as residual fuel oil, without being processed as such. *Imported crude oil burned as fuel* includes lease condensate and liquid hydrocarbons produced from tar sand oil, gilsonite, and oil shale.

**Isomerization.** A refining process which alters the fundamental arrangement of atoms in the molecule. Used to convert normal butane into isobutane, an alkylation process feedstock, and normal pentane and hexane into isopentane and isohexane, high-octane gasoline components.

**Kerosene.** A petroleum distillate that boils at a temperature between 300-550 degrees F., that has a flash point higher than 100 degrees F. by ASTM Method D56, that has a gravity range from 40-46 degrees API, and that has a burning point in the range of 150-175 degrees F. Included are the two classifications recognized by ASTM D-3699: No. 1-K and No. 2-K, and all grades of kerosene called range or stove oil which have properties similar to No. 1 fuel oil, but with a gravity of about 43 degrees API and a maximum end-point of 625 degrees F. Kerosene is used in space heaters, cook stoves, and water heaters and is suitable for use as an illuminant when burned in wick lamps.

**Kerosene-Type Jet Fuel.** A quality kerosene product with an average gravity of 40.7 degrees API, a 10 percent distillation temperature of 400 degrees F. It is covered by ASTM Specification D1655 and Military Specifications MIL-T-5624L (Grades JP-5 and JP-8). A relatively low-freezing point distillate of the kerosene type; it is used primarily for commercial turbojet and turbo-prop aircraft engines.

**Lease Condensate.** A natural gas liquid recovered from gas well gas (associated and non-associated) in lease separators or natural gas field facilities. Lease condensate consists primarily of pentanes and heavier hydrocarbons.

**Liquefied Petroleum Gases (LPG).** Propane, propylene, butanes, butylene, butane-propane mixtures, ethane-propane mixtures, and isobutane produced at refineries or natural gas processing plants, including plants that fractionate raw natural gas plant liquids.

**Liquefied Refinery Gases (LRG).** Liquefied petroleum gases fractionated from refinery or still gases. Through compression and/or refrigeration they are retained in the liquid state. The reported categories are ethane and/or ethylene, propane and/or propylene, butane and/or butylene, butane-propane mixtures, and isobutane. Excludes still gases used for chemical or rubber manufacture which are reported as a petrochemical feedstock and also excludes liquefied gases ready for blending into gasoline which are reported as gasoline blending components. Liquefied refinery gases are reported for use as petrochemical feedstocks or other uses.

**Lubricating Oils.** A substance used to reduce friction between bearing surfaces. Petroleum lubricants may be produced either from distillates or residues. Other substances may be added to impart or improve certain required properties. *Lubricants* includes all grades of lubricating oils from spindle oil to cylinder oil and those used in greases. The three categories include Bright Stock, Neutral, and Other.

**Bright Stock.** A refined, high viscosity lubricating oil base stock that is usually made from residuum by a treatment such as deasphalting, acid treatment, or solvent extraction.

**Neutral.** A distillate lubricating oil base stock with a viscosity that is usually not above 550 Saybolt Universal Seconds (SUS) at 100 degrees F. It is prepared by a treatment such as hydrofining, acid treatment, or solvent extraction.

**Other.** A lubricating oil base stock used in finished lubricating oils and greases, including black, coastal, and red oils.

**Middle Distillates.** A general classification that includes distillate fuel oil and kerosene.

**Miscellaneous Products.** Includes all finished products not classified elsewhere, e.g., petrolatum, absorption oils, ram-jet fuel, petroleum rocket fuels, synthetic natural gas feedstocks, specialty oils and medicinal oils.

**Motor Gasoline Blending Components.** Finished components in the gasoline range which will be used for blending or compounding into finished motor gasoline. Pool gasoline is included in this category.

**Motor Gasoline, Finished.** A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark-ignition engines. Specifications for motor gasoline, as given in ASTM Specification D439 or Federal Specification VV-G-1690B, include a boiling range of 122 degrees to 158 degrees F. at the 10-percent point to 365 degrees to 374 degrees F. at the 90-percent point and a Reid vapor pressure range from 9 to 15 psi. *Motor gasoline* includes finished leaded gasoline, finished unleaded gasoline, and gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.



**Finished Leaded Gasoline.** Contains more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon. The actual lead content of any given gallon, however, may vary as a function of the size of the producer and company according to specific Environmental Protection Agency waiver provisions. Premium and regular grades are included, depending on the octane rating. Includes leaded gasohol. Blendstock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Finished Unleaded Gasoline.** Contains not more than 0.05 gram of lead per gallon and not more than 0.005 gram of phosphorus per gallon. Premium and regular grades are included, depending on the octane rating. Includes unleaded gasohol. Blend stock is excluded until blending has been completed. Alcohol that is to be used in the blending of gasohol is also excluded.

**Gasohol.** A blend of finished motor gasoline (leaded or unleaded) and alcohol (generally ethanol but sometimes methanol) in which 10 percent or more of the product is alcohol.

**Motor Gasoline, Total.** Includes finished leaded motor gasoline, finished unleaded motor gasoline, motor gasoline blending components, and gasohol.

**Naphtha-Type Jet Fuel.** A fuel in the heavy naphtha boiling range with an average gravity of 52.8 degrees API and 20 to 90 percent distillation temperatures of 290 degrees to 470 degrees F., meeting Military Specification MIL-T-5624L (Grade JP-4). JP-4 is used for turbojet and turboprop aircraft engines, primarily by the military. Excludes ram-jet and petroleum rocket fuels.

**Natural Gas.** A mixture of hydrocarbons and small quantities of various nonhydrocarbons existing in the gaseous phase or in solution with crude oil in underground reservoirs.

**Natural Gas Field Facility.** A field facility designed to process natural gas produced from more than one lease for the purpose of recovering condensate from a stream of natural gas; however, some field facilities are designed to recover propane, butane, natural gasoline, etc., and to control the quality of natural gas to be marketed.

**Natural Gas Plant Liquids.** Natural gas liquids recovered from natural gas in gas processing plants, and in some situations, from natural gas field facilities. Natural gas liquids extracted by fractionators are also included. These liquids are defined according to the published specifications of the Gas Processors Association and the American Society for Testing and Materials, and are classified as follows: Ethane, propane, ethane-propane mix, isobutane, butane, butane-propane mix, isopentane, natural gasoline, plant condensate, unfractionated stream, and other products from natural gas processing plants (i.e., products meeting the standards of finished petroleum products produced at natural gas processing plants, such as finished

motor gasoline, finished aviation gasoline, special naphthas, kerosene, distillate fuel oil, and miscellaneous products).

**Natural Gasoline and Isopentane.** A mixture of hydrocarbons, mostly pentanes and heavier, extracted from natural gas, that meets vapor pressure, end-point, and other specifications for natural gasoline set by the Gas Processors Association. Includes isopentane which is a saturated branch-chain hydrocarbon, C<sub>5</sub>H<sub>12</sub>, obtained by fractionation of natural gasoline or isomerization of normal pentane.

**OPEC.** The acronym for the Organization of Petroleum Exporting Countries, oil-producing and exporting countries that have organized for the purpose of negotiating with oil companies on matters of oil production, prices, and future concession rights. Current members are Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates, and Venezuela.

**Operable Distillation Capacity.** The maximum amount of input that can be processed by a crude oil distillation unit in a 24-hour period, making allowances for processing limitations due to types and grades of inputs, limitations of downstream facilities, scheduled and unscheduled downtimes, and environmental constraints. Includes any shutdown capacity that could be placed in operation within 90 days.

**Other Hydrocarbons.** Materials received by a refinery and consumed as raw materials. Includes hydrogen, coal tar derivatives, gilsonite, and natural gas received by the refinery for reforming into hydrogen. Natural gas to be used as fuel is excluded.

**Petrochemical Feedstock Use.** Chemical feedstocks derived from petroleum, principally for the manufacture of chemicals, synthetic rubber, and a variety of plastics. The categories reported are *Naphtha-less than 400 degrees F. end-point* and *Other oils-over 400 degrees F. end-point*.

**Naphtha-Less Than 400 Degrees F. End-Point.** A naphtha with an end point of less than 400 degrees F. that is reported as used as a petrochemical feedstock.

**Other Oils-Over 400 Degrees F. End-Point.** Oils with an end point over 400 degrees F. that is reported as used as a petrochemical feedstock.

**Petroleum Coke.** A residue, the final product of the condensation process in cracking. This product is reported as marketable coke or catalyst coke. The conversion factor is five barrels of 42 U.S. gallons per short ton.

**Marketable Coke.** Those grades of coke produced in delayed or fluid cokers which may be recovered as relatively pure carbon. This *green* coke may be sold or further purified by calcining.

**Catalyst Coke.** In many catalytic operations (i.e., catalytic cracking) carbon is deposited on the catalyst, thus deactivating the catalyst. The catalyst is reactivated by burning off the carbon, which is used as a fuel in the refinery process. This carbon or coke is not recoverable in a concentrated form.

**Petroleum Products.** Petroleum products are obtained from the processing of crude oil (including lease condensate), natural gas, and other hydrocarbon compounds. Petroleum products include unfinished oils, natural gasoline and isopentane, plant condensate, unfractionated stream, liquefied petroleum gases; aviation gasoline, motor gasoline, naphtha-type jet fuel, kerosene-type jet fuel, kerosene, distillate fuel oil, residual fuel oil, naphtha less than 400° F. end-point, other oils-over 400° F. end-point, special naphthas, lubricants, waxes, petroleum coke, asphalt, road oil, still gas, and miscellaneous products.

**Petroleum Refinery.** An installation that manufactures finished petroleum products from crude oil, unfinished oils, natural gas liquids, other hydrocarbons, and alcohol.

**Plant Condensate.** One of the natural gas liquids, mostly pentanes and heavier hydrocarbons, recovered and separated as liquids at gas inlet separators or scrubbers in processing plants.

**Primary Stocks.** Stocks of crude oil or petroleum products held in storage at (or in) leases, refineries, natural gas processing plants, pipelines, tank farms, and bulk terminals that can store at least 50,000 barrels of petroleum products or that can receive petroleum products by tanker, barge, or pipeline. Crude oil that is in transit from Alaska, or that is stored on Federal leases or in the Strategic Petroleum Reserve is included. *Primary Stocks* excludes stocks of foreign origin that are held in bonded warehouse storage.

**Propane.** A normally gaseous paraffinic compound, C<sub>3</sub>H<sub>8</sub>, which includes all products covered by NGPA Specification for commercial and HD-5 propane and ASTM Specification D1835. It is used primarily as a fuel and as a petrochemical feedstock.

**Propylene.** An olefinic hydrocarbon, C<sub>3</sub>H<sub>6</sub>, recovered from refinery or petrochemical processes.

**Residual Fuel Oil.** The topped crude of refinery operation which includes No. 5 and No. 6 fuel oils as defined in ASTM Specification D396 and Federal Specification VV-F-815C, Navy Special fuel oil as defined in Military Specification MIL-F-859E including Amendment 2 (NATO Symbol F-77), and Bunker C fuel oil. Residual fuel oil is used for the production of electric power, space heating, vessel bunkering, and various industrial purposes. Includes imported crude oil to be burned as a fuel.

**Road Oil.** Any heavy petroleum oil, including residual asphaltic oil used as a dust palliative and surface treatment on roads and highways. It is generally produced in

six grades from 0, the most liquid, to 5, the most viscous.

**Special Naphthas.** All finished products within the gasoline range that are used as paint thinners, cleaners, or solvents. These products are refined to a specified flash point and have a boiling range of 90 degrees to 220 degrees F. *Special naphthas* includes all commercial hexane and cleaning solvents conforming to ASTM Specifications D1836 and D484, respectively. Naphthas to be blended or marketed as motor gasoline or aviation gasoline or that are to be used as petrochemical and synthetic natural gas (SNG) feedstocks are excluded.

**Steam (Purchased).** Steam, purchased for use by a refinery, that was not generated from within the refinery complex.

**Still Gas (Refinery Gas).** Any form or mixture of gas produced in refineries by distillation cracking, reforming, and other processes. The principal constituents are methane, ethane, ethylene, butane, butylene, propane, propylene, etc. Still gas is reported for petrochemical feedstock use and/or refinery fuel use.

**Petrochemical Feedstock Use.** Includes all refinery streams which are used by chemical or rubber manufacturing operations for further processing, less the amount of such streams returned to the source refinery. Finished petrochemical products are not included. For example, polyethylene, butadiene, etc., are considered petrochemical products; therefore, only their feed-stock equivalents are included.

**Fuel Use.** All other still gas.

**Strategic Petroleum Reserve (SPR).** Stocks (currently, only crude oil) maintained by the Federal Government for use during periods of major supply interruption.

**Thermal Cracking.** A refining process in which heat and pressure are used to break down, rearrange, or combine hydrocarbon molecules. Thermal cracking is used to increase the yield of gasoline obtainable from crude oil.

**Unfinished Oils.** Includes all oils requiring further processing, except those requiring only mechanical blending.

**Unfractionated Streams.** Mixtures of unsegregated natural gas liquid components excluding those included in plant condensate. This product is extracted from natural gas.

**Vacuum Distillation.** Distillation under reduced pressure (less the atmospheric) which lowers the boiling temperature of the liquid being distilled. This technique, with its relatively low temperatures, prevents cracking or decomposition of the charge stock.

**Visbreaking.** A thermal cracking process in which heavy vacuum-still bottoms produced on the primary



distillation unit are cracked to increase production of distillate products.

**Wax.** A solid or semi-solid material derived from petroleum distillates or residues by such treatments as chilling, precipitating with a solvent, or de-oiling. It is light-colored, more-or-less translucent crystalline mass, slightly greasy to the touch, consisting of a mixture of solid hydrocarbons in which the paraffin series predominates. Includes all marketable wax whether crude scale or fully refined. The three grades included are microcrystalline, crystalline-fully refined, and crystalline-other. The conversion factor is 280 pounds per 42-gallon barrel.

**Microcrystalline Wax.** Wax extracted from certain petroleum residues having a finer and less apparent crystalline structure than paraffin wax and having the following physical characteristics:

Penetration at 77 degrees F. (D-1321)-60 maximum.  
Viscosity at 210 degrees F. In Saybolt Universal Sec-

onds (SUS) (D-88)-60 SUS (10.22 centistokes) minimum to 150 SUS (31.8 centistokes) maximum. Oil content (D-721)-5 percent minimum.

**Crystalline-Fully Refined Wax.** A light-colored paraffin wax having the following characteristics:

Viscosity at 210 degrees F. (D-88)-59.9 SUS (10.18 centistokes) maximum. Oil Content (D-721)-0.5 percent maximum. Other + 20 color, Saybolt minimum.

**Crystalline-Other Wax.** A paraffin wax having the following characteristics:

Viscosity at 210 degrees F. (D-88)-59.9 SUS (10.18 centistokes) maximum. Oil Content (D-721)-0.51 percent minimum to 15 percent maximum.

**Western Hemisphere.** That half of the earth that includes North and South America and the surrounding waters.

# Bureau of Mines Petroleum Refining Districts and PAD Districts

*The following are the Bureau of Mines petroleum refining districts which make up the PAD districts:*

## PAD District I

**East Coast:** District of Columbia and the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, and the following counties of the State of New York: Cayuga, Tompkins, Chemung and all counties east and north thereof. Also the following counties in the State of Pennsylvania: Bradford, Sullivan, Columbia, Montour, Northumberland, Dauphin, York, and all counties east thereof.

**Appalachian #1:** The State of West Virginia and those parts of the States of Pennsylvania and New York not included in the East Coast District.

## PAD District II

**Appalachian #2:** The following counties of the State of Ohio: Erie, Huron, Crawford, Marion, Delaware, Franklin, Pickaway, Ross, Pike, Scioto, and all counties east thereof.

**Indiana—Illinois—Kentucky:** The States of Indiana, Illinois, Kentucky, Tennessee, Michigan, and that part of the State of Ohio not included in the Appalachian District.

**Minnesota—Wisconsin—North and South Dakota:** The States of Minnesota, Wisconsin, North Dakota, and South Dakota.

**Oklahoma—Kansas—Missouri:** The States of Oklahoma, Kansas, Missouri, Nebraska, and Iowa.

## PAD District III

**Texas Inland:** The State of Texas except the Texas Gulf Coast District.

**Texas Gulf Coast:** The following counties of the State of Texas: Newton, Orange, Jefferson, Jasper, Tyler, Hardin, Liberty, Chambers, Polk, San Jacinto, Montgomery, Harris, Galveston, Waller; Fort Bend, Brazoria, Wharton, Matagorda, Jackson, Victoria, Calhoun, Refugio, Aransas, San Patricio, Nueces, Kleberg, Kenedy, Willacy, and Cameron.

**Louisiana Gulf Coast:** The following Parishes of the State of Louisiana: Vernon, Rapides, Avoyelles, Pointe Coupee, West Feliciana, East Feliciana, Saint Helena, Tangipahoa, Washington, and all Parishes south thereof. Also the following counties of the State of Mississippi: Pearl River, Stone, George, Hancock, Harrison, and Jackson. Also the following counties of the State of Alabama: Mobile and Baldwin.

**North Louisiana—Arkansas:** The State of Arkansas and those parts of the States of Louisiana, Mississippi, and Alabama not included in the Louisiana Gulf Coast District.

**New Mexico:** The State of New Mexico.

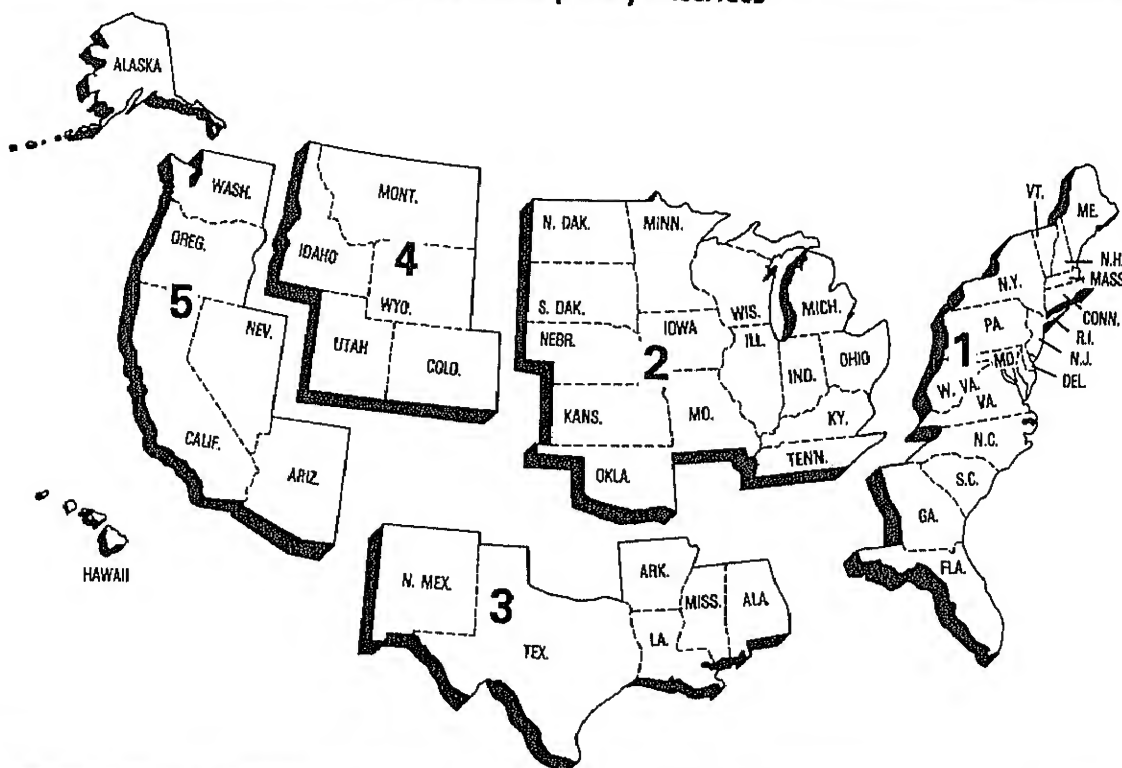
## PAD District IV

**Rocky Mountain:** The States of Montana, Idaho, Wyoming, Utah, and Colorado.

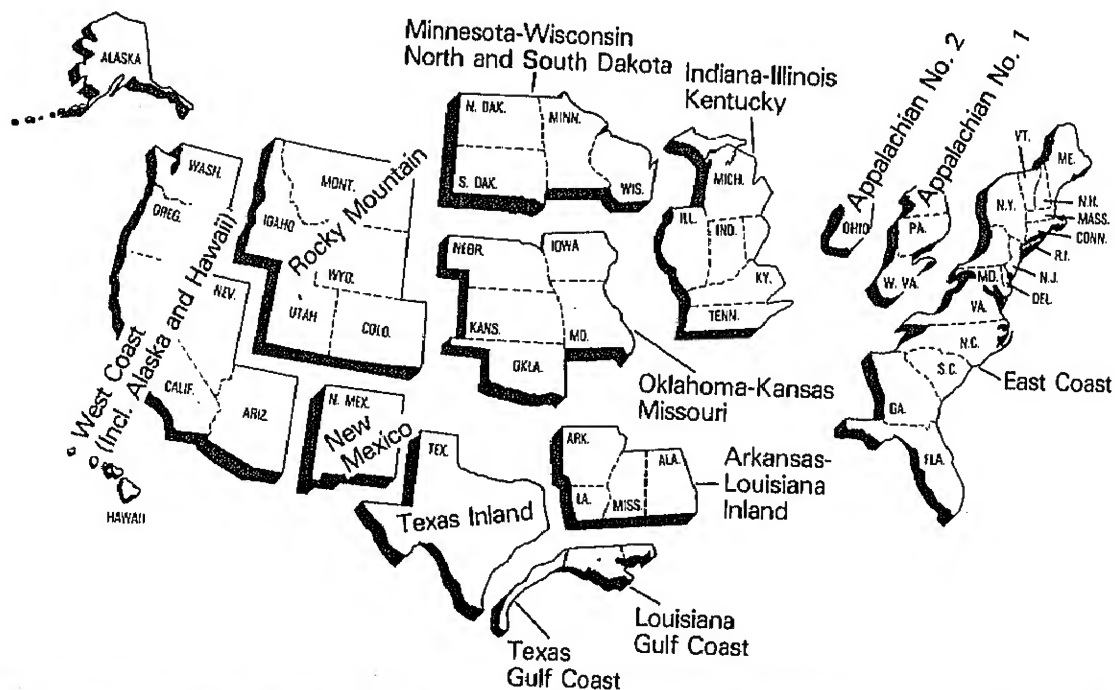
## PAD District V

**West Coast:** The States of Washington, Oregon, California, Nevada, Arizona, Alaska, and Hawaii.

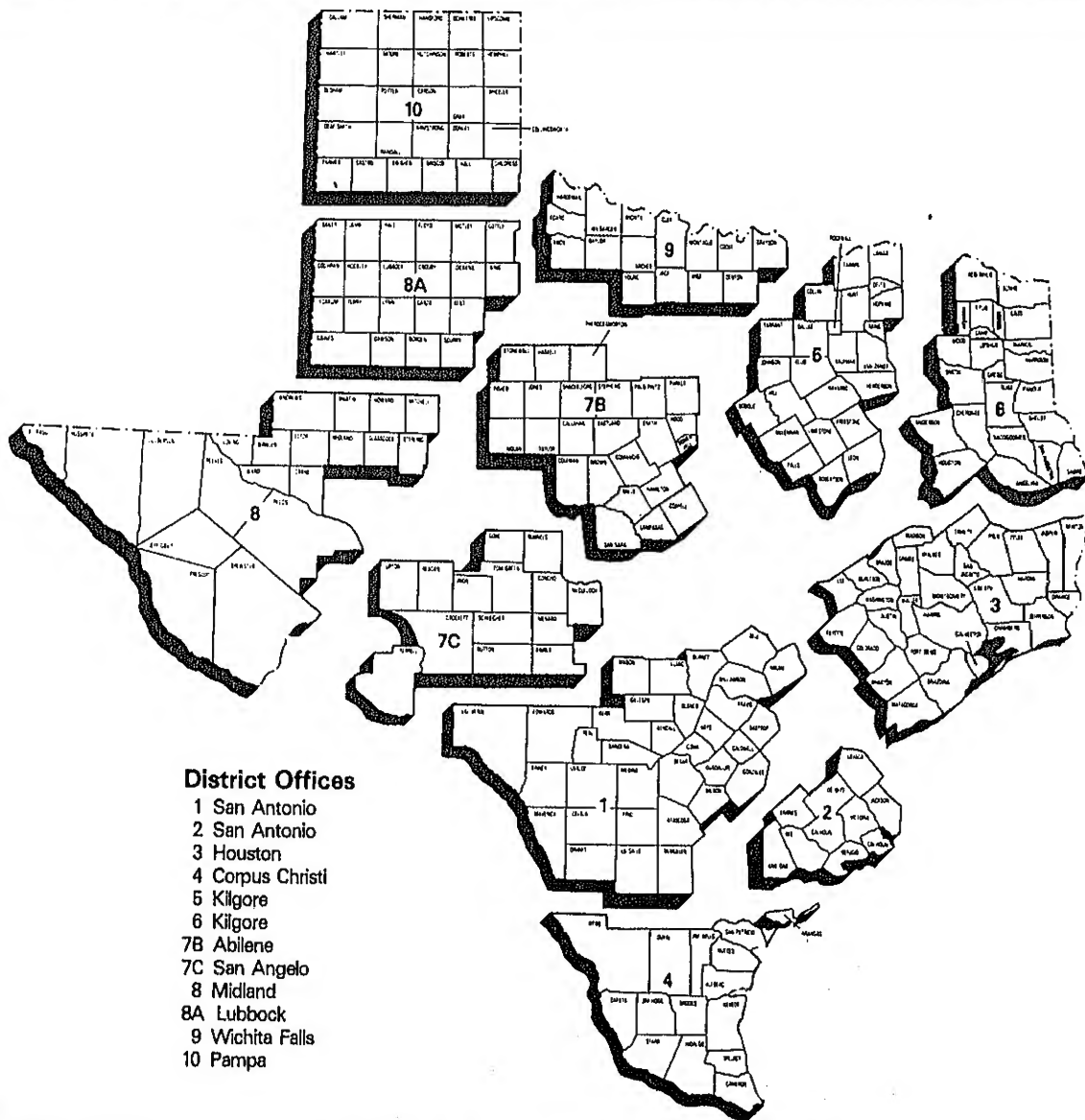
## Petroleum Administration for Defense (PAD) Districts



## Bureau of Mines Refining Districts

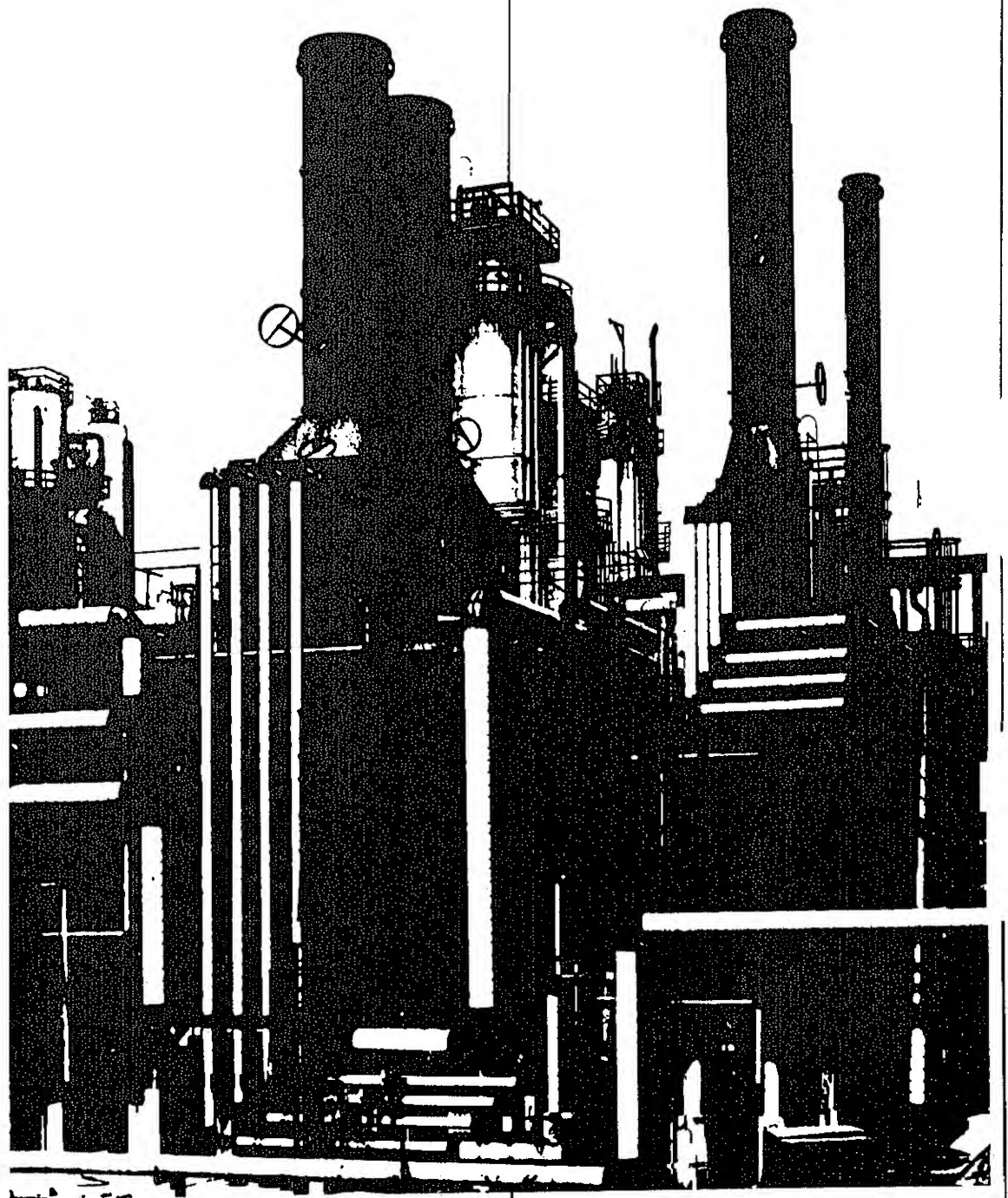


## District Map Oil and Gas Division Railroad Commission of Texas





# Explanatory Notes





## Note 1: Data Collection Methodology

### Background

Beginning in January 1983, the Energy Information Administration (EIA) unified its petroleum supply data collection activities into the Petroleum Supply Reporting System (PSRS). The PSRS represents a family of data collection survey forms, data processing systems and publication systems that have been consolidated to achieve comparability and consistency throughout. The primary focus of the consolidation has been to revise the weekly and monthly survey reporting forms to assure consistency in form layout, preparation instructions, and definitions. As a result, a new set of survey forms were implemented in January 1983. The following are the new form numbers and their corresponding predecessor forms:

New Form Number	Name	Old Form Number
EIA-800	Weekly Refinery Report	EIA-161
EIA-801	Weekly Bulk Terminal Report	EIA-162
EIA-802	Weekly Product Pipeline Report	EIA-163
EIA-803	Weekly Crude Oil Stocks Report	EIA-164
EIA-804	Weekly Imports Report	EIA-165
EIA-805	Weekly Shipments from Puerto Rico to the United States Report	—
EIA-810	Monthly Refinery Report	EIA-87
EIA-811	Monthly Bulk Terminal Report	EIA-88
EIA-812	Monthly Product Pipeline Report	EIA-89
EIA-813	Monthly Crude Oil Report	EIA-90
ERA-60	Monthly Imports Report	ERA-60
EIA-815	Monthly Shipments from Puerto Rico to the United States Report	FEA-P133-M-0
EIA-816	Monthly Natural Gas Liquids Report	EIA-64
EIA-817	Monthly Tanker and Barge Movement Report	EIA-170

Forms EIA-800 through 805 comprise the Weekly Petroleum Supply Reporting System (WPSRS). This system is designed to collect basic refinery operations and product stock data for major products on a weekly basis. Data from the WPSRS are published in the *Weekly Petroleum Status Report (WPSR)* and are also used to calculate the preliminary statistics in the "Summary Statistics" section of the *Petroleum Supply Monthly*

(PSM). A description of the WPSRS survey forms follows in Note 1.1.

Forms EIA-810-813, 815-817 and ERA-60 comprise the Monthly Petroleum Supply Reporting System (MPSRS). These surveys collect detailed refinery operations data, refinery, bulk terminal and pipeline stocks data, crude oil and petroleum product imports data and movements of petroleum products and crude oil between PAD Districts data. These surveys are the primary source of data for the "Summary Statistics" and "Detailed Statistics" sections of the PSM. A description of MPSRS survey forms follows in Note 1.2.

Data are also obtained in magnetic tape form from the Bureau of the Census on a monthly basis. These tapes contain aggregated import and export statistics that are used in the preparation of the PSM. A description of the Census data follows in Note 1.3.

### Note 1.1: Weekly Petroleum Supply Reporting System (WPSRS)

#### Background

The EIA first began publishing weekly petroleum supply statistics in April 1979 in response to the Iranian oil crisis. Initially, the published data were taken from the American Petroleum Institute (API) *Weekly Statistical Bulletin*. However, in January 1980 the EIA began to publish weekly statistics from its own surveys, with the exception of imports statistics which the EIA did not begin collecting until June 1980.

The weekly surveys collect data comparable to those collected on a monthly basis. Selected petroleum companies report weekly data to the EIA on crude oil and petroleum product stocks, refinery inputs and production, and crude oil and petroleum product imports. On Forms EIA-800 through EIA-803, companies report data on a custody basis. On the Form EIA-804, the importer of record reports each shipment entering the United States. On Form EIA-805, a company shipping unfinished oils and finished petroleum products into the United States from Puerto Rico reports each shipment. Current weekly data and the most recent monthly data are used to estimate the totals that are published in the *Weekly Petroleum Status Report*.

#### Sample Frame

The sample of companies that report weekly is selected from the universe of companies that report on the comparable monthly surveys. Sampled companies report data only for facilities in the 50 States and District of Columbia.

The sample for each survey is taken from the following universe:

**EIA-800:** Based on the EIA-810 universe, which includes all petroleum refineries in the United States and



its territories, industrial facilities that have crude oil distillation capacity and produce some refined petroleum products, and plants that produce finished motor gasoline through mechanical blending. The selected sample size is 215.

**EIA-801:** Based on the EIA-811 universe, which includes all bulk terminal facilities in the United States and its territories that have either a total bulk storage capacity of 50,000 barrels or more, or that receive petroleum products by tanker, barge, or pipeline. The selected sample size is 93.

**EIA-802:** Based on the EIA-812 universe, which includes all petroleum product pipeline companies in the United States and its territories that transport refined petroleum products, including interstate, intrastate and intracompany pipeline movements. Pipeline companies that transport only natural gas liquids are not included in the EIA-802 frame. Only those pipeline companies that transport products covered in the weekly survey are included. The selected sample size is 65.

**EIA-803:** Based on the EIA-813 universe, which consists of all companies which carry or store crude oil of 1,000 barrels or more in the 50 States, and the District of Columbia. Included are gathering and trunk pipeline companies (including interstate, intrastate, and intracompany pipelines), crude oil producers, terminal operators, storers of crude oil, and companies transporting Alaskan crude oil by water.

**EIA-804:** Based on the ERA-60 universe, which includes all importers of record of crude oil and petroleum products into the United States and Puerto Rico. The selected sample size is 65.

**EIA-805:** Based on the EIA-815 universe, which includes all shippers of unfinished oils and petroleum products into the United States from Puerto Rico. Four companies report.

### Sampling Method

The cut-off method is the sampling procedure used for all weekly surveys except the EIA-802, which uses the monthly universe in its entirety. In the cut-off method, companies are ranked from largest to smallest on the basis of the quantities reported during some previous 12-month period. Companies are chosen for the sampling, beginning with the largest and adding companies until the total sample covers 90 percent of the total for the previous time period for each product published in the *Weekly Petroleum Status Report*.

### Collection Methods

Data are collected by mail, mailgram, telephone, Telex, and Telefax on a weekly basis. The report period closes each Friday at 7 a.m. All canvassed firms and terminal operations companies must file by 5 p.m. on the following Monday.

### Estimation and Imputation

After company reports have been checked and entered into the weekly data base, weekly totals for given products are estimated by using the following formula.

The total reported by all companies for the most recent month ( $M_t$ ) is divided by the amount reported by the sample of companies for the most recent month ( $M_s$ ). The result is multiplied by the amount reported by the sample of companies for the current week ( $W_s$ ). The answer,  $W_t$ , is an estimate of the amount that would have been reported by all companies for the current week if all companies reported each week.

$$W_t = \frac{M_t}{M_s} (W_s)$$

This procedure is used to estimate total weekly inputs to refineries and production.

To estimate stocks of finished products, the preceding procedure is followed separately for refineries, bulk terminals, and pipelines. Total estimates are formed by summing over establishment types.

Weekly imports data are highly variable on a company-by-company basis or a week-by-week basis. Therefore, an exponentially smoothed ratio has been developed. The estimate of weekly imports is the sum of the smoothed ratio multiplied by the weekly values and estimates for shipments from Puerto Rico. Imports of other oils includes an adjustment from Census data for unlicensed products because of coverage differences between the monthly imports data and Census data.

Explicit imputation is done for companies which do not respond in a given week. The imputed values are exponentially smoothed means of recent reports from the specific company.

### Response Rates

The response rate for the published estimates is usually between 95 and 98 percent.

## Note 1.2: Monthly Petroleum Supply Reporting System (MPSRS)

### Background

The MPSRS was implemented in January 1983 as the result of an extensive effort to integrate the collection and processing of petroleum supply data that have been collected on other survey forms for many years. The collection of monthly petroleum supply statistics began as early as 1918 when the Bureau of Mines (BOM) began collecting data on refinery operations and crude oil stocks and movements. The collection systems

were further expanded to include natural gas plant liquids production and storage in 1925, imports of crude oil and petroleum products and storage and movements of petroleum products in 1959, and tanker and barge movements of crude oil and petroleum products in 1964. Since their inception, each survey has undergone numerous changes, but the MPSRS is the first effort to make them all consistent and comparable.

### Respondent Frame

**EIA-810:** All petroleum refineries and plants that produce finished motor gasoline through the mechanical blending of liquids which are operated or controlled in the 50 States, the District of Columbia, Puerto Rico, the Virgin Islands, the Hawaiian Foreign Trade Zone, and Guam. Approximately 313 respondents report on the EIA-810.

**EIA-811:** All bulk terminal facilities in the 50 States and the District of Columbia, Puerto Rico, and the Virgin Islands that (a) have a total bulk storage capacity of 50,000 barrels or more and/or (b) receive petroleum products by tanker, barge, or pipeline, regardless of ownership of the material. Approximately 328 respondents report on the EIA-811.

**EIA-812:** All products pipeline companies that carry petroleum products (including interstate, intrastate and intracompany pipelines) in the 50 States and the District of Columbia. Approximately 94 respondents report on the EIA-812.

**EIA-813:** All companies which carry or store crude oil of 1,000 barrels or more in the 50 States, and the District of Columbia. Included are gathering and trunk pipeline companies (including interstate, intrastate, and intracompany pipelines), crude oil producers, terminal operators, storers of crude oil, and companies transporting Alaskan crude oil by water.

**EIA-815:** All licensed importers and importers of record shipping petroleum products from Puerto Rico into the 50 States and the District of Columbia.

Import data from the ERA-60 and EIA-815 are integrated into the import statistics reported in the PSM.

**EIA-816:** All operators of facilities designed to extract liquid hydrocarbons from natural gas stream (natural gas processing plants) or to separate a hydrocarbon stream into its component products, i.e., propane, butane, natural gasoline, etc. (fractionators). Approximately 990 respondents report on the EIA-816.

**EIA-817:** All known companies and plants that have custody of crude oil and petroleum products transported by tanker and barge between PAD Districts or between PAD Districts and the Panama Canal. There are about 50 respondents.

**ERA-60:** All licensed importers and importers of record importing crude oil and petroleum products into the

United States and Puerto Rico. The respondent universe consisted of approximately 1,100 firms as of July 31, 1982. However, only a selected 250 importers must report each month regardless of import activity. All others must report only for a month in which they actually had imports. The respondent universe for this survey is updated whenever an import license is granted by the Office of Oil Imports of the ERA.

EIA utilizes a number of sources and methods to maintain the survey respondent lists. On a regular basis, survey managers review industry publications such as the *Oil and Gas Journal* and *LP Gas Almanac* for information on facilities or companies going into operation or closing down. These are augmented by articles in newspapers, letters from respondents indicating changes in status and information received from survey systems operated by other offices.

Periodically an extensive survey study is conducted to completely refresh the frames. This involves consolidating information from every known source including State agencies, federal agencies (e.g., EPA, Corps of Engineers, Census Bureau, etc.), and private industry directories. The effort also includes the evaluation of the impact of potential frame changes on the historical time series of data published from these respondents. The results of this frame study are usually implemented in January to provide a full year under the same frame.

### Collection Methods

The data for all of the MPSRS surveys are collected monthly. Completed forms are required to be postmarked by the 20th day following the end of the report month, with the exception of the EIA-815 and ERA-60 which are due 15 work days following the end of the report month. Telephone follow-up calls are made to nonrespondents prior to the publication deadline, for their data. An automated mailing list is maintained and is used to monitor receipt of the forms.

### Imputing Missing Data

Imputation is performed only for nonresponding companies that submitted reports the previous month. For such companies, previous monthly values are used for current values. The previous month's ending stocks value is used for both the current month's beginning stocks and the current month's ending stocks. In the event that the previous month's data were estimated, the respondent is contacted and requested to submit estimates, if necessary, to be followed by submission of actual data. Data for nonrespondents on the EIA-815 and 817, and ERA-60 are not imputed.

### Response Rates

As of the filing deadline, the response rates of the EIA-810 through EIA-813 respondents is over 90 per-

cent. The response rate for the EIA-816 is over 85 percent and for the EIA-817 it is 98 percent. All companies that have not responded are contacted by telephone. Although data are taken by telephone to expedite processing, a certified submission is still required. Names of companies that fail to file for 2 consecutive months are forwarded for further noncompliance action.

In July 1982, the ERA-60 survey had a response rate of 98 percent by the filing deadline. The universe was 1,100 firms at that time. (Because this is a dynamic survey, the universe is constantly changing.) Standard follow-up of nonrespondents is made to insure that all reports are received, since data are not imputed for nonrespondents. In addition, response is cross-checked with response on the Petroleum Licensing Decrementation System (PLDS), a listing of each month's importers. The response rate is generally 98 to 99 percent by the time the data are first published.

### **Note 1.3: Census Import (IM-145) and Export (EM-522 and EM-594) Data**

#### **Background**

Each month the EIA purchases magnetic tapes of aggregated import and export statistics from the Bureau of the Census. These data provide the only source of export statistics and are used to augment the import data collected by the EIA. Export statistics and import data from the Census tapes on liquefied petroleum gases, bonded ships bunkers and military offshore use are published in the *PSM*.

#### **Import Statistics (IM-145)**

##### **Coverage**

The import statistics reflect both government and non-government imports of merchandise from foreign countries into the U.S. Customs territory (the 50 States, the District of Columbia, and Puerto Rico), without regard to whether or not a commercial transaction is involved. In general, the statistics record the physical movement of merchandise into the United States from foreign countries, with the exception of the following types of transactions that are excluded from the statistics:

1. Merchandise in-transit through the United States, when documented with Customs as an in-transit movement.
2. Shipments from anywhere to U.S. possessions and shipments from U.S. possessions to the United States. (U.S. possessions include Puerto Rico, the Virgin Islands, Guam, and American Samoa.)
3. U.S. merchandise that was held in foreign countries by the U.S. Armed Forces and is returned to the United States for the use of the Armed Forces.

#### **Source of Import Information**

The official U.S. import statistics are compiled by the Bureau of the Census from copies of the import entry and warehouse withdrawal forms that importers are required by law to file with Customs officials (Customs Forms 7501, 7505, and 7506).

Imported petroleum is reported as *Imports for Consumption*. Imports for consumption are a combination of entries for immediate consumption and withdrawals from warehouses for consumption. With certain exceptions as indicated above, these data generally reflect the total of commodities entered into U.S. consumption channels.

#### **Country and Area of Origin**

The country reported in the statistics as the country of origin is defined as the country where the merchandise was grown, mined, or manufactured. In instances where the country of origin cannot be determined, the transactions are credited to the country of shipment.

#### **Export Statistics (EM-522 and EM-594)**

##### **Coverage**

The export statistics reflect both government and non-government exports of domestic and foreign merchandise from the U.S. Customs territory (the 50 States, the District of Columbia, and Puerto Rico) to foreign countries, without regard to whether or not the exportation involves a commercial transaction. In general, the statistics record the physical movement of merchandise out of the United States to foreign countries, with the exception of the following types of transactions:

1. All shipments from U.S. possessions, regardless of whether the shipments are sent to the United States, to other U.S. possessions, or to foreign countries.
2. Merchandise shipped in transit through the United States from one foreign country to another, when documented as such with U.S. Customs.
3. Bunker fuels and other supplies and equipment for use on departing vessels, planes, or other carriers engaged in foreign trade.

#### **Source of Export Information**

The official U.S. export statistics are compiled by the Bureau of the Census primarily from copies of Shipper's Export Declarations. Exporters are required to file Shipper's Export Declarations with Customs officials. The only exceptions are those exporters who have been authorized to submit data directly to the Bureau of Census on magnetic tape, punched cards, or monthly Shipper's Summary Export Declarations.

## Country and Area of Destination

The country of destination is defined as the country of ultimate destination or the country where the goods are to be consumed, further processed, or manufactured, as known to the shipper at the time of exportation. If the shipper does not know the country of ultimate destination, the shipment is credited to the last country to which the shipper knows that the merchandise will be shipped in the same form as it was when exported.

## Note 2: Supply

The components of petroleum supply are field production, refinery production, imports, and stock withdrawal or addition:

**Field Production** is the sum of crude oil production (including lease condensate), natural gas processing plant production, and new supply (field production) of other liquids used by refineries.

Crude oil production is estimated based on data received from State conservation and revenue agencies. For further explanation, see Explanatory Note 3.

Field production of natural gas plant liquids (NGPL), including finished petroleum products, is reported monthly on survey Form EIA-816, *Monthly Natural Gas Liquids Report*. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. For survey description and other detail, see Explanatory Note 1.2.

**Refinery Production** of LRGs, ethane, and finished petroleum products is reported monthly on survey Form EIA-810, *Monthly Refinery Report*. Published production of these products equals refinery production minus refinery input. Refinery production of unfinished oils and of motor and aviation gasoline blending components appears on a net basis under refinery input. Negative production will occur when the amount of a product produced during the month is less than the amount of that same product that is reprocessed (input) or reclassified to become another product during the same month. It should also be noted that refineries do not export production of crude oil, natural gasoline, isopentane, unfractionated stream, plant condensate, or other hydrocarbons.

**Imports** of crude oil and petroleum products are reported monthly on Form ERA-60, *Report of Oil Imports into the United States and Puerto Rico*, and Form EIA-815, *Shipments of Refined Products (Including Unfinished Oils) from Puerto Rico to the United States*. In addition, the Census Bureau Tabulation IM-145 summarizes import data from Customs import declarations reported on Customs Forms 7501 and 7505. The most prominent difference between the EIA and Census systems appears in imports of liquefied petroleum gases

(LPG), where the Census data show a much higher level of imports than EIA data. This occurs because the ERA-60 respondent frame was built by monitoring importers of licensed products and LPGs are not licensed products. Therefore, respondents that import only LPGs have not been identified, and do not report these imports to the Department of Energy. Since these importers are required to file form 7501 with the U.S. Customs Service, EIA obtains data on imports of LPGs from Census Tabulation IM-145. Additional data taken from the IM-145 are relatively small quantities of naphtha- and kerosene-type jet fuels, distillate fuel oils, and residual fuel oils withdrawn from bonded storage for use in international trade and for military offshore use. Even though these duty-free fuels are stored on United States shores, they did not enter the United States for domestic consumption and therefore are not included in the ERA-60 reporting system.

**Stock Withdrawal (+) or Addition (-)** is calculated by subtracting stocks at the end of the month from stocks at the beginning of the same month. (Note: The beginning stocks of one month are equal to the ending stocks of the previous month.) A positive result (+) would represent a withdrawal from stocks and an increase in petroleum supplies distributed for domestic consumption. A negative result (-) would represent a buildup of stocks and a reduction in the amount of petroleum supplies distributed for domestic consumption. For a description of survey forms used to make stock withdrawal or addition calculations see Explanatory Note 5.

**Unaccounted-for Crude Oil** is a balancing item that represents the difference between crude oil supply and disposition.

Crude oil supply is the sum of field production, imports and stock withdrawals or additions. Crude oil disposition is the sum of exports, refinery input, losses and product supplied. Unaccounted-for crude oil is calculated by subtracting crude oil supplies from crude oil disposition. A positive result indicates that refiners and exporters reported use of more crude oil than was reported to have been available to them. (This occurs, for example, when imports are undercounted due to late reporting or other problems.) A negative result would indicate that more crude oil was reported to have been supplied to refiners and exporters than they reported used.

## Note 3: Domestic Crude Oil Production

Data for the Crude Oil Production System (COPS) are reported to the Department of Energy by each of the State conservation agencies, which collect crude oil production values for tax purposes. The U.S. Geological Survey reports the volume of crude oil that is produced offshore in Federally-owned waters. With the exception of ten State conservation agencies, all of these reports are received monthly. After each calendar year, these monthly numbers are updated using the annual reports

from the State conservation agencies and the U.S. Geological Survey. The ten States that do not report monthly values are Indiana, Kentucky, Missouri, Arkansas, Utah, New York, Ohio, Pennsylvania, West Virginia, and Wyoming. Monthly values are estimated for these States using the individual linear trends of their historical annual crude oil production values.

There is a time lag of approximately 4 months between the end of the reporting month and the time when the monthly COPS information becomes available. Table 11 of this publication provides information on crude oil production for the most recent month for which COPS values are available. In order to present more timely crude oil production values, the EIA's Dallas Field Office prepares a series of State level estimates which are based on historical production patterns and are summed to obtain the monthly crude oil production values shown in the summary statistics of this publication.

The individual State level estimates are either exponential curve fitted projections based on recent data or are constant level projections based on the average production rate during a recent time period. In some cases, adjustments are made to these estimates based on additional information on expected changes in production rates supplied by a State agency, a trade association, or an individual field operator.

#### Note 4: Disposition

The components of petroleum disposition are crude oil losses, refinery inputs, exports, and products supplied for domestic consumption.

**Crude Oil Losses** is the sum of crude oil losses at refineries. Crude oil losses at refineries are reported on Form EIA-810, *Refinery Report*.

**Refinery Inputs** of crude oil, natural gas plant liquids, and other liquids are reported monthly on survey Form EIA-810, *Monthly Refinery Report*. Published inputs of unfinished oils and of motor and aviation gasoline blending components equal refinery input minus refinery output. Refinery inputs of finished petroleum products are reported on a net basis under refinery production.

**Exports** of crude oil and petroleum products are compiled from Census Bureau tabulations EM-522 and EM-594. Exports include crude oil shipments to Puerto Rico, the Virgin Islands, and the Hawaiian Foreign Trade Zone, which are obtained from refinery receipts reported on Form EIA-810, by refineries located in these places.

**Product supplied** for each product is calculated by summing field production plus refinery production, plus imports, plus stock withdrawal or minus stock addition, minus crude oil losses (plus net receipts when calculated on a PAD District basis), minus re-

finery input, minus exports. This formula ensures that total disposition equals total supply.

**Products supplied** indicates those quantities of petroleum products supplied for domestic consumption. Occasionally, the result for a product is negative because total disposition of that product exceeds total supply. Negative product supplied may occur for a number of reasons: (1) product reclassification has not been reported, (2) data were misreported or reported late, (3) in the case of calculations on a PAD District basis, the figure for net receipts was inaccurate because the coverage of interdistrict movements was incomplete.

**Product supplied for crude oil** is the sum of crude oil burned on leases and by pipelines as fuel oil. These data are reported on EIA-813, *Monthly Crude Oil Report*. Prior to January 1983, crude oil burned on leases and by pipelines as fuel oil were reported as either distillate or residual fuel oil and included in product supplied for these products.

#### Note 5: Stocks

Primary stocks of crude oil are the sum of ending stocks reported monthly on Form EIA-810, *Monthly Refinery Report*, and on Form EIA-813, *Monthly Crude Oil Report*. Crude oil held in the Strategic Petroleum Reserve is included unless otherwise noted. Alaskan crude oil in transit is also included. Stocks of crude oil are also reported weekly on Form EIA-800, *Weekly Refinery Report*, and on Form EIA-803, *Weekly Crude Oil Stocks Report*. Primary stocks of petroleum products are summed from data reported on Form EIA-816, *Monthly Natural Gas Liquids Report*, Form EIA-811, *Monthly Bulk Terminal Report*, and on Form EIA-812, *Monthly Product Pipeline Report*. Primary stocks of petroleum products do not include either secondary stocks held by dealers and jobbers or stocks held by consumers. Petroleum product stocks are also reported weekly on Form EIA-800, *Weekly Refinery Report*, Form EIA-801, *Weekly Bulk Terminal Report*, and Form EIA-802, *Weekly Crude Oil Stocks Report*. For survey descriptions and other details, see Explanatory Notes 1.1 - 1.3.

#### Note 6: Average Stock Levels

The graphs displaying monthly stock levels of crude oil, motor gasoline, distillate fuel oil, residual fuel oil, liquefied petroleum gases, and other products provide the user with recent data as well as a summary of data from January through December or from July through June for the most recent 3-year period. This summary takes the form of an *average range* that includes seasonal variation determined from a longer time period. The



average range represents the historical pattern; it is not a forecast.

These curves are updated semiannually (on April 1 and October 1), by basing the *average ranges* on a more recent time period. Each 3-year data series is adjusted by dropping the first 6 months and including the most recent 6 months.

For each data series, the monthly seasonal factors are estimated by means of a seasonal adjustment technique developed at the Bureau of the Census (Census X-11). The seasonal factors are assumed to be stable (i.e., unchanging from year to year) and additive. The series is deseasonalized by subtracting the seasonal factor for the appropriate month from the reported stock levels. The intent of deseasonalization is to remove only seasonal variation from the data. Thus, a deseasonalized series would contain the same trends and irregularities as the original data. For crude oil stocks, the derived seasonal factors are very small relative to crude oil stock levels. Therefore, the seasonal factors for distillate fuel oil, residual fuel oil, liquefied petroleum gases and other products are derived using monthly data from 1974-1980. For motor gasoline, the seasonal factors are based on monthly data from 1975, 1976, 1978, 1979 and 1980. In 1977, there was virtually no seasonal behavior in motor gasoline stocks. Monthly stock levels stayed at the same high level for the entire year. In addition, the seasonal patterns in 1973, 1974 and 1977 were not representative of the recent past, and these years were not used in the determination of seasonal patterns for motor gasoline stocks. Because of these differences in the year-to-year seasonal fluctuation of motor gasoline, the evidence for the illustrated seasonal patterns for crude oil, distillate fuel oil, residual fuel oil, liquefied petroleum gases and other products is stronger than is the evidence for the illustrated seasonal patterns for motor gasoline.

In some cases, these seasonal patterns do not show a smooth transition from month to month. For example, the June factor for residual fuel oil is slightly less than the May and July values, making a bump in the curve. As there is little difference in the magnitude of these seasonal factors, it is possible that this variation is due to the small number of observations (7 years) and the data variability.

After seasonal factors are derived, the most recent 3-year period (from January through December or from July through June) is deseasonalized. The average of the deseasonalized 36-month series determines the midpoint of the deseasonalized average band. The standard error of the deseasonalized 36 months is calculated adjusting for extreme data points. The width of the *average range* is twice this standard error.

The upper curve of the *average range* is defined as the average plus the seasonal factors plus the standard error. The lower curve is defined as the average plus the seasonal factors minus the standard error.

## Note 7: Movements

Movements of crude oil between PAD Districts are reported on Form EIA-817, *Monthly Tanker and Barge Movement Report*, and on Form EIA-813, *Monthly Crude Oil Report*. Petroleum product movements are reported on Forms EIA-817 and EIA-812, *Monthly Product Pipeline Report*. Net receipts is the difference between total movements into and total movements out of each PAD District by pipeline, tanker, and barge. For survey descriptions and other detail, see Explanatory Note 1.2.

## Note 8: Preliminary Monthly Statistics

Weekly data (Forms EIA-800, 801, 802, 803, and 804) are used to estimate the most recent monthly values for the *Summary Statistics* section. Since some of the weekly reporting periods overlap two adjacent months, it is necessary to use weighting factors in the calculation of the monthly values.

To estimate crude oil and petroleum product imports, crude oil input to refineries and production of petroleum products for a specific month, the weekly estimates are weighted by the number of days of that month included in each week, then summed.

End-of-month stock levels of crude oil and the major products (motor gasoline, distillate fuel oil, and residual fuel oil) are calculated in a similar manner, but use only the two weekly reporting periods that cover the end-of-week stocks before and after the end of the month. The end-of-month stock level is calculated by first calculating the stock change between the two weeks. The daily stock change between the two end-of-week stock levels is then calculated. This number is multiplied by the weighting factor of the earlier of the two weeks (the week that covers the last day of the month of interest). This change is added to the earlier of the two end-of-week stock levels to estimate the end-of-month stock level.

Preliminary monthly estimates of domestic crude oil production are calculated as described in Explanatory Note 3.

## Note 9: Notes on Tables

**Note 9.1 Crude Oil and Petroleum Products Overview** statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Crude Oil and Petroleum Products Stock Withdrawal (+) or Addition (-), Petroleum Products Supplied, Total Imports, Crude Oil Imports, Total Exports, and Crude Oil Exports appear as labeled in Table 4. Total Production and Crude Oil Production appear under Field Production in Table 4.

- Natural Gas Plant Production is the sum of Natural Gas Liquids and Finished Petroleum Products Field Production in Table 4.

- Petroleum Products Imports is the sum of Natural Gas Liquids and LRGs, Other Liquids, and Finished Petroleum Products Imports in Table 4.

- Total Crude Oil and Petroleum Products Ending Stocks appear in thousands of barrels in Table 2.

**Note 9.2 Crude Oil Supply and Disposition** statistics on the referenced line appear in Table 1 of the Detailed Statistics, except where noted.

- Total Domestic Field Production, Alaskan Field Production, SPR Imports, Other Imports (synonymous with Imports Gross Excl. SPR), SPR and Other Primary Stocks Withdrawal (+) or Addition (-), Unaccounted For Crude Oil, Refinery Inputs, and Exports appear as labeled in Table 1.

- Crude losses and Product Supplied appear as labeled in Table 4.

- SPR Ending Stocks and Other Primary Ending Stocks (synonymous with stocks excluding SPR) appear in thousands of barrels in Table 1.

- Total Crude Oil Ending Stocks appear in thousands of barrels in Table 2.

- Total Imports appear in Table 4.

**Note 9.3 Finished Motor Gasoline Supply and Disposition** statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Exports, and Product Supplied appear as labeled in Table 4.

- Unleaded Percent of Total Product Supplied represents the ratio of finished unleaded motor gasoline product supplied to total finished motor gasoline product supplied, multiplied by 100 and rounded to the nearest tenth.

- Ending Stocks appear in thousands of barrels in Table 2.

**Note 9.4 Distillate and Residual Fuel Oil Supply and Disposition** statistics on the referenced lines appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Exports, and Product Supplied appear as labeled in Table 4.

- Ending Stocks appear in thousands of barrels in Table 2.

**Note 9.5 Liquefied Petroleum Gases Supply and Disposition** statistics represent the aggregation of statistics on ethane, propane, butane, butane-propane mixtures, ethane-propane mixtures, and isobutane. The statistics on the referenced line appear in Table 4 of the Detailed Statistics, except where noted.

- Total Production is the sum of Field Production and Refinery Production in Table 4.

- Imports, Stocks Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied appear as labeled in Table 4.

- Ending stocks appear in thousands of barrels in Table 2.

**Note 9.6 Other Petroleum Products Supply and Disposition** statistics represent the aggregation of statistics on natural gasoline, isopentane, unfractionated stream, plant condensate, other liquids, and all finished petroleum products except finished motor gasoline, distillate fuel oil, and residual fuel oil. The statistics on the referenced line are aggregated from Table 4 of the Detailed Statistics, except where noted.

- Total Production is the aggregated sum of Field Production and Refinery Production in Table 4.

- Imports, Stock Withdrawal (+) or Addition (-), Refinery Inputs, Exports, and Product Supplied are aggregated from Table 4.

- Ending stocks are aggregated from ending stocks in thousands of barrels in Table 2.

#### **Note 9.7 Table 1. U.S. Petroleum Balance**

- Lines (1) through (3): Crude oil (including lease condensate) production for *Alaska, Lower 48 States*, and *Total U.S.* are calculated by calling the conservation agency in Alaska for Alaskan crude oil production during the month, estimating crude oil production in the United States (see Explanatory Note 3), and taking the difference to equal production in the Lower 48 States.

- Line (5): *SPR Imports* are reported on Survey Form ERA-60.

- Line (12): *Total Other Sources* equals crude oil stock withdrawal (+) or addition (-) plus unaccounted for crude oil minus crude losses in Table 2.

- Line (14): Natural gas plant liquids (NGPL) *Production* equals field production of natural gas liquids (NGL) plus field production of finished petroleum products in Table 2.

- Line (15): *NGPL Imports* equals the sum of the im-

ports of natural gasoline and isopentane, unfractionated stream, and plant condensate imports in Table 2.

- Line (16): *NGPL Stock Withdrawal (+) or Addition (-)* is equal to the sum of stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate in Table 2.

- Line (17) equals the sum of lines (14), (15), and (16).

- Line (18): Unfinished oils and gasoline blending components *Stock Withdrawal (+) or Addition (-)* equals stock withdrawal (+) or addition (-) for other hydrocarbons and alcohol, for unfinished oils, motor gasoline blending components, and aviation gasoline blending components.

- Line (20): *Other Hydrocarbons and Alcohol New Supply* equals the field production of same in Table 2.

- Line (21): *Refinery Processing Gain* is a balancing item equal to total refinery production minus total refinery input in Table 2.

- Line (23): *Total Other Liquids* equals the sum of lines (18) through (22).

- Line (24): *Total Production of Products* equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; plus crude oil product supplied in Table 2.

- Line (25): *Gross Imports of Refined Products* equals imports of LPG plus imports of finished petroleum products in Table 2.

- Line (26): *Exports of Refined Products* equals exports of LPG plus exports of finished petroleum products in Table 2.

- Line (27): *Net Imports of Refined Products* equals the difference between lines (25) and (26).

- Line (28): *Total New Supply of Products* equals crude oil input to refineries plus field production of NGPL and finished petroleum products; plus imports of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of natural gasoline and isopentane, unfractionated stream, and plant condensate; plus stock withdrawal (+) or addition (-) of other hydrocarbons and alcohol, unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus imports of unfinished oils, aviation gasoline blending components, and motor gasoline blending components; plus field production of other hydrocarbons and alcohol; plus total refinery production; minus total refinery input; minus crude oil product supplied plus imports of LPG and finished petroleum products; minus exports of LPG and finished petroleum products in Table 2.

- Line (29): *Refined Products Stocks Withdrawal (+) or Addition (-)* equals the sum of stock withdrawal (+) or addition (-) for LPG and finished petroleum products in Table 2.

- Line (30): *Total Petroleum Products Supplied for Domestic Use* equals total products supplied in Table 2.

- Lines (31) through (35) equal the respective products supplied in Table 2.

- Line (36): *Other Products Supplied* equals the sum of natural gasoline and isopentane, unfractionated stream, plant condensate, aviation gasoline, naphtha < 400 Deg. F for petrochemical feedstock use, other oils > 400 Deg. F. for petrochemical feedstock use, special naphthas, lubricants, waxes, coke, asphalt, road oil, still gas, unfinished oils, motor gasoline blending components, aviation gasoline blending components and miscellaneous products supplied in Table 2.

- Line (37): *Total Product Supplied* is equal to total products supplied in Table 2.

- The sum of lines (38) and (39), *stocks of Crude Oil and Lease Condensate (Excluding SPR)* and stocks held by the *Strategic Petroleum Reserve*, equals ending stocks of crude oil in Table 2. SPR stocks are reported on Form EIA-813.

- Line (43): *stocks of Refined Products*, equals the sum of LPG and finished petroleum product stocks in Table 2.



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